DOCUMENT RESUME

ED 404 930 HE 029 935

AUTHOR	Barnetson, Robert James
TITLE	Marketing the University of Calgary to Frosh: A Motivational Typology of Student-College Choice.
PUB DATE	97
NOTE	100p.; M.A. Thesis, University of Calgary.
PUB TYPE	Dissertations/Theses - Masters Theses (042)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	Attitude Measures; *College Bound Students; *College Choice; College Freshmen; Decision Making; Foreign Countries; Higher Education; High Schools; High School Students; Questionnaires; *Student Attitudes; Student Motivation; *Student Recruitment; Surveys
IDENTIFIERS	*University of Calgary (Canada)

ABSTRACT

This thesis proposes a segmentation of the University of Calgary's (Canada) freshman class based on benefits sought from attendance and provides descriptions of each benefit segment that includes the impact of institutional characteristics. A motivational typology for university participation is presented and the marketing implications of this segmentation on recruiting prospective students are explored. A four-cluster segmentation emerged from analysis, illustrating the predominance of fiscal motives in motivating freshmen from the Baby-Bust and Echo-Bust cohorts to attend a university. A questionnaire was developed which covered biographical information, reasons for attendance, and institutional characteristics. Questionnaire responses were analyzed from 77 freshmen students (out of a sample of 300) at the University of Calgary who had graduated from high school in June 1996. The following motives were most frequently cited as reasons for deciding to attend college: achievement of a higher standard of living, expansion of career opportunities, and career goal requirements. Other motives included the desire to: obtain a degree, have fun, become self-sufficient, learn new things, increase understanding, and meet new people. The institutional characteristics most cited as important were college reputation and quality of education. The survey instrument is included. (Contains 111 references.) (JLS)

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THE UNIVERSITY OF CALGARY

Marketing The University of Calgary to Frosh: A Motivational Typology of Student-College Choice

by

Robert James Barnetson

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF MASTER OF ARTS

DEPARTMENT OF EDUCATIONAL POLICY AND ADMINISTRATIVE STUDIES

CALGARY, ALBERTA
JANUARY, 1997

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FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "Marketing The University of Calgary to Frosh: A Motivational Typology of Student-College Choice" submitted by Robert James Barnetson in partial fulfillment of the requirements for the degree of Master of Arts.

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Jan 17/97

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ABSTRACT

This thesis presents a segmentation of the University of Calgary's frosh class based on benefits sought from attendance and provides descriptions of each benefit segment that include the impact of institutional characteristics. A motivational typology for university participation is presented and the marketing implications of this segmentation on recruiting prospective students at a regional, western Canadian university are also explored.

A four-cluster segmentation emerged from analysis, illustrating the predominance of fiscal motives in motivating frosh from the Baby-Bust and Echo-Boomer cohorts to attend university. This generates significant opportunities to enhance the effectiveness and efficiency of recruiting strategies and material, assuming this tact is congruent with institutional-image goals. Also discussed is the incongruence of this motive with collegial faculty values.

ACKNOWLEDGEMENTS

I would like to acknowledge the important role Dr. Alice Boberg played as my supervisor, providing an unending supply of support, guidance and "light" (shudder) reading. I would also like to thank the members of my committee for their insight and comments.

Without Dr. Lorna Cammaert's confidence in my ability to complete graduate-level work and the financial support of Dr. Peggy Patterson (Associate Vice-president, Student Affairs) through the University of Calgary's Enrollment Management Working Group, this thesis would not have been possible.

My colleagues at The University of Calgary's Student Resource Centre—Dr. Marti Cleveland-Innes, Glynn Hunter and Julie Kearns—were instrumental in providing me with necessary skills and confidence. Dr. Gary Krivy and his staff at the Registrar's Office were extremely helpful in securing an appropriate sample. Also deserving thanks are Dr. Tom Gougeon (once a math teacher...) for a comprehensive introduction to survey research and Dr. Timothy Pyrch for introducing me to the radical roots of adult education.

I would like to thank my family for their support and my friends—Alex, Christian Rob, and Steve—for their patience in putting up with two years of what must have been really bad conversation ("Hey, check out this dendrogram..."). Finally, I'd like to thank Sister Nanc for her unwavering willingness to run down factual information *ad nauseam* while I was on St. Helena and putting up with my obsessive intellectualizing and haphazard driving during our extended excursions into rural Alberta.

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CHAPTER ONE—INTRODUCTION

The desirability of Canadian higher education has changed significantly during the past 30 years. The questioning of the '60s, the consumerism of the '70s and the recession of the '80s have impacted both demand and accessibility (Pain, 1986) while the intense competition of the '90s is redefining the student-institution relationship as transactional as much as mentorial.

Students are the primary consumer group making purchase decisions affecting universities: whether to attend, where to attend, and what to study. Fundamentally influencing this process are the benefits sought. As Grove (1992) notes, students don't buy products or services, rather they buy expectations of benefit or solutions to problems. There are indications that discovering which benefits are sought makes it easier to influence the number and type of applicants (Church and Gillingham, 1988).

The University of Calgary is currently the dominant post-secondary destination for Calgary grade-twelve students. Increasing competition from local and out-of-market institutions necessitates more effective marketing to maintain a high-level of demand for a U of C education. A concurrent reduction in available funding requires that any new initiatives maximize efficiency.

The purpose of this study is twofold: (1) it broadly confirms the benefit-dimension model Church and Gillingham developed for Laurentian University students; and (2) it segments the first-year class at The University of Calgary based upon benefits sought from attendance. Powerful segment commonalties with implications for recruiting are discussed.

Definition of Terms

Kotler (1976) states that increasing interest in marketing higher education reflects a shift from a seller's market to a buyer's market and that this shift belatedly mirrors the three epochs in consumer behavior: the production era, the sales era and the marketing era (Beckman, Kurtz and Boone, 1988). One hundred years ago, the prevailing attitude was that a good product (physical quality) would sell itself and that attitude prevailed in higher education during the 1950s, '60s and '70s. Subsequently, emphasis shifted to selling products—that is, overcoming consumer resistance to purchasing non-essential products—after the First World War and was mirrored in higher education during the

post-1982 recession era. Marketing is the most recent approach to gain vogue, recognizing that there is an overabundance of consumer options and, assuming no impediments, those that most closely match consumer desire will succeed.

The growth in post-secondary education in Canada in the 1970s, along with the contraction of the traditional student base and shifting social norms, brought with it a change in the relationship between students and institutions (Pain, 1986). Students suddenly became, in action if not in words, consumers of higher education, creating a *transactional* relationship based on exchanging tuition for credentials, and making the previous paradigm (based on an *in loco parentis* model) obsolete. However, unlike American schools faced with stiff competition, Canadian universities and colleges are only now accepting (or being forced to accept) this change because of the decline in public funding.

The key concept in the new relationship between institutions and students— *marketing*— is often misunderstood and mistakenly thought synonymous with advertising. Beckman and colleagues define marketing as "the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods and services to create exchanges that satisfy individual and organizations objectives" (p.4). This approach contends that it is more effective and efficient to (re)design a product to meet consumer preferences than attempt to alter these preferences (see Decision-making below).

In this context, *effectiveness* is how successful approaches are at getting consumers to execute appropriate purchase behavior. This is not simply a measure of how many consumers purchase a product but incorporates the idea that satisfaction is based on congruence between the expectations consumers have about a product and their actual experience with it: those who purchase the product should have expectations that can be met. This means that advertising should create an accurate picture of the product, thereby assisting potential buyers to determine whether the product will meet their needs. The research component of marketing means that these products will be (re)designed to appeal to a specific population.

Efficiency is an indication of how much effort must be expended to get consumers to execute appropriate purchase behavior. While difficult to quantify, efficiency is premised upon the idea that appropriate information can punch hot-buttons in

consumers, alerting them that a product is or is not desirable to them, and thereby minimizing the investment the producer has to make in advertising and selling. Theoretically, a perfectly marketed product would require only enough advertising to create awareness of its existence while the product would sell itself based on meeting identified needs and desired characteristics.

Market segmentation recognizes that consumers are differentially responsive to product and service characteristics, can be reached through different media, and can be appealed to through different promotions and content (Litten, 1979). Market segmentation divides a market into distinct and meaningful groups who merit separate products and/or marketing mixes (Engel, Warshaw and Kinnear, 1987; Green and Tull, 1978).

Segmentation makes several assumptions about markets: (1) differences within a single market exist; (2) those differences can be identified; (3) those differences are reasonably stable over time; (4) homogenous groups within a market can be identified; and (5) marketing performance can be enhanced when market homogeneity is assumed.

Comprehending purchase decisions is based on understanding that consumers purchase products either to solve problems or receive benefit. Segmenting markets based upon *benefit dimensions* assume that there are a number of identifiable and homogenous groupings of reasons that significantly impact students' decisions to attend university. Dimensions reflect the outcomes students are seeking from university (Grove, 1992) and interact with (and are a product of) students' backgrounds. Examining why students are motivated to attend university diverges from much higher-education research on motivation which focuses on quantifying motivation (i.e. how motivated are they?) (Stage and Williams, 1988).

Statement of the Problem

While confirming the benefit-dimension model Church and Gillingham developed for Laurentian University students and developing a benefit segmentation of the U of C's frosh class, this study answers four questions:

1. What typology based on benefits sought from participation emerges among first-year U of C students and is this congruent with Church and Gillingham' s analysis of benefit dimensions?

2. What is the optimal clustering (segmenting) of the frosh class based upon the benefit typology developed?

3. How can each benefit segment best be described by biographical information, motives for participation and perceptions of institutional characteristics?

4. Are there important benefit-segment differences/commonalties that can be used to increase the efficiency and effectiveness of the U of C's recruiting practices?

Significance

The primary outcome of this study is an accurate picture of the benefits sought by Calgary high-school students who entered the U of C in 1996. Understanding what motivated students to attend provides the basis for improving the quality of intervention in the post-secondary decision-making process thus leading to more effective and efficient recruiting strategies.

This study also provides a basis for future research on frosh classes. This could include sampling different populations, longitudinal work with this cohort to monitor changing expectations, or with other entering classes to observe trends in the Calgary high-school market.

Finally, it extends Church and Gillingham's and Stage and William's work (and to a lesser degree that of Boshier (1977) and Morstain and Smart (1974)) on benefit segmentation in post-secondary students. Specifically, this study tests their approach in a fundamentally different market, refines their instruments and ties benefit segments to manipulable institutional characteristics with suggestions for recruiting strategies.

CHAPTER TWO—LITERATURE REVIEW

Segmenting the University of Calgary's frosh class requires understanding the literature of career development theory (the context in which students' make educational decisions), the post-secondary decision-making process (the process during which segmentation occurs), decision-making theory (to adequately conceptualize the process), and benefit-segmentation methodology as well the social context from which the University of Calgary's frosh come. Relevant articles based upon research are reviewed below.

CAREER DEVELOPMENT

Overview

Career or lifestyle planning provides the context in which the post-secondary decision-making process takes place; the process approaches of Super and Ginzberg seem more appropriate for understanding traditional-age students than trait-factor or eclectic theories. Haney and Howland (1978 in Harren, 1979) define career development as

> ...a process whereby individuals develop realistic goals for professional and personal lifestyle futures, thereby building strategies for movement towards these goals, through the investigation of appropriate and available options open to the individual based on personal need and direction orientation and the dynamics of surrounding social and economics environments.

Super (1957) and Ginzberg, Ginsburg, Axelrad and Herma (1951) both see career development during adolescence as a predictable, cumulative process of exploration and specification leading towards an increasingly refined realization of one's self-concept via vocational choice in a trade-off manner (i.e. desire is constrained by reality with individuals maximizing their utility).

Super's Lifespan Theory

Super's revised theory (Osipow, 1968) describes self-concept as beginning with an awareness of self that gradually expands into more complex and abstract self-concepts and systems of self-concepts. As one becomes aware of oneself as both a distinct individual and part of social groups with certain commonalties, one's self-concept continues to evolve, reflecting the assimilation of experiences. This self-concept impacts the decisions one makes which in turn alters one's self-concept.

Super outlines six stages of career development correlated with normal developmental tasks:

1. Birth (ages 0 to 4)
2. Growth (ages 4 to 14)
3. Exploration (ages 11 to 25)
4. Establishment (ages 18 to 45)
5. Maintenance (ages 40 to 65)
6. Disengagement (ages 60+)

Individuals may recycle through stages three through five regardless of age, reflecting that developmental stages are the interaction of the individual within the world of work (Sharf, 1992). Although this approach does not fully consider the constrictive effects of socialization on the decision sets of women, it does fill the functional need for a context in which students make decision, however narrow they may be. High-school students and frosh, in general, are in the exploration stage attempting to understand occupations, sort through career alternatives and their own interests, abilities and aptitudes, decide on a career and start work. Adolescents' relative lack of experience will negatively impact both the quality of execution and level of refinement in their self-concepts.

Super, Crites, Hummel, Moser, Overstreet and Warnath (1957) outline three sub-stages within exploration: tentative, transition, and trial. *Tentative* is primarily concerned with clarifying occupational choices by learning about entry-level jobs and skill requirements. *Transition* is the choice of a first full-time job field or the training leading towards a job while *Trial* involves holding a first job in one's occupational field. Support for Super's contention that predictable, steady increases in sophistication and attention to vocational–choice tasks occur through adolescent is strong (Osipow, 1968).

Ginzberg et al.'s Theory

This degree of empirical support is not apparent for Ginzberg et al.'s (1951) theory although Super appears to draw on its stages and these stages make intuitive sense from a developmental perspective. Ginzberg notes three main stages: fantasy, tentative, and realistic. The tentative stage has four sub-stages:

1. *Development of interests*—after about age 11 children tend to base occupational choices on their interests and their (albeit limited) experience with occupations.
2. *Development of capacities*—between the ages of 13 and 14 adolescents begin to be capable of assessing their own abilities.

3. *Development of Values*—adolescents aged 15 and 16 start to incorporate their goals and values into their career decisions, although their ability to weigh interests, capacities and values may be initially limited. Also, abstract life planning issues start to enter consideration (marriage, income, etc.).
4. *Transition stage*—this stage occurs around age 17 and is the jumping off point for the post-secondary decision-making process.

The realistic stage has three sub-stages:

1. *Exploration*—entrance into post-secondary education is marked by a narrowing of goals but still retains significant flexibility as interests change and new options open up. Those who do not go on to college may experience this process during their initial years of employment.
2. *Crystallization*—represents a commitment to a specific vocation or field of study. Change based on having new experiences and/or re-evaluating old ones is still possible.
3. *Specification*—this stage (that may never arrive for some) represents career maturity and a commitment to a particular field or occupation.

Both models note the transition stage is where the educational system forces students to engage in the Post-Secondary Decision-Making (PSDM) process (Osipow, 1968). Those choosing to participate in post-secondary education would likely move from Super's transition to trial in the latter part of their educational program (see Post-Secondary Decision-Making Process below).

Gilmour, Spiro and Dolich (1981) found that students set career goals (with varying degrees of clarity) early; these provided criteria necessary in post-secondary choice (i.e. Will attending this institution further my career goal?). Lay and Maguire (1981) see career planning as a process occurring simultaneous with post-secondary decision-making, positing that in early childhood students develop images (of varying accuracy) of many post-secondary institutions and, as they begin to match their abilities, needs, and desires (i.e. their self-concepts) with their perception of post-secondary offerings, they create a small number of choices that form their initial choice set.

POST-SECONDARY DECISION-MAKING (PSDM) PROCESS

Overview

Research into post-secondary choice comes mainly from the fields of economics, psychology and sociology (Paulsen, 1990; Chapman, 1981). Economists view this behavior as similar to consumer decision making as students attempt to maximize the utility of their investment. The personal background factors so important to sociological theories have important interactional effects with institutional attributes in decision making.

Psychologists also focus on maximizing utility in the form of person-environment fit: students try to attain congruity between their characteristics and institutional climate. Because campus climate is in large part created by students, institutions where students are mobile or have a large number of alternatives tend to have homogenous student bodies as students self-select. In contrast, sociologists have tended to concentrate on status attainment based upon reference groups and students' backgrounds and their effect on aspirations and choice behavior.

All three schools make important contributions to understanding the PSDM process (Gilmour et al., 1981). This study draws mainly on an economic model (see Decision Making below) based upon a sociological approach to motivation. The similarity of the psychological perspective to the economic is important because congruence plays a large part in retention and student satisfaction (Paulsen, 1990).

Hossler and Gallager's (1987) post-secondary decision-making model expanded through retention stages has seven stages that represent the ever-narrowing enrollment-management funnel (see also Chapman, 1986; Gilmour et al., 1981; Kotler, 1976).

1. Predisposition
2. Search
3. Application (choice)
4. Admission and Registration (choice)
5. Attendance (choice)
6. Convocation

Chapman (1986) notes that students will pass through these stages either explicitly or implicitly, recognizing that the PSDM process tends to be poorly informed and executed by traditional-age students. This model claims neither universality nor the negation of

individual agency but it is a useful and general conception of the process that most students go through. The model may be relevant to students outside of the traditional age range (17–23); however, it does not reflect the unique pressures and influences affecting adult students (Chapman, 1981; Bradley and Cleveland-Innes, 1991).

Predisposition

The majority of Calgary high-school students are forced by systemic pressure to enter the PSDM process during the fall semester of their grade-twelve year (Holden, 1992; Gilmour et al., 1981). For some, this process (see Figure 2.1) will end immediately as they choose not to continue their education (although some may return to this decision later on) while others will continue with the process through to convocation.

During the predisposition stage, students recognize the opportunity and possible desirability of continuing their education and decide whether or to enter the PSDM process (Chapman, 1986). Choosing to enter the PSDM process boils down to an assessment of the costs and benefits of attendance including how it fits into students' career plans (Strayer, 1988).

Students' predisposition to entering the PSDM process is a complex interaction of multiple factors that Jackson (1978) represents as:

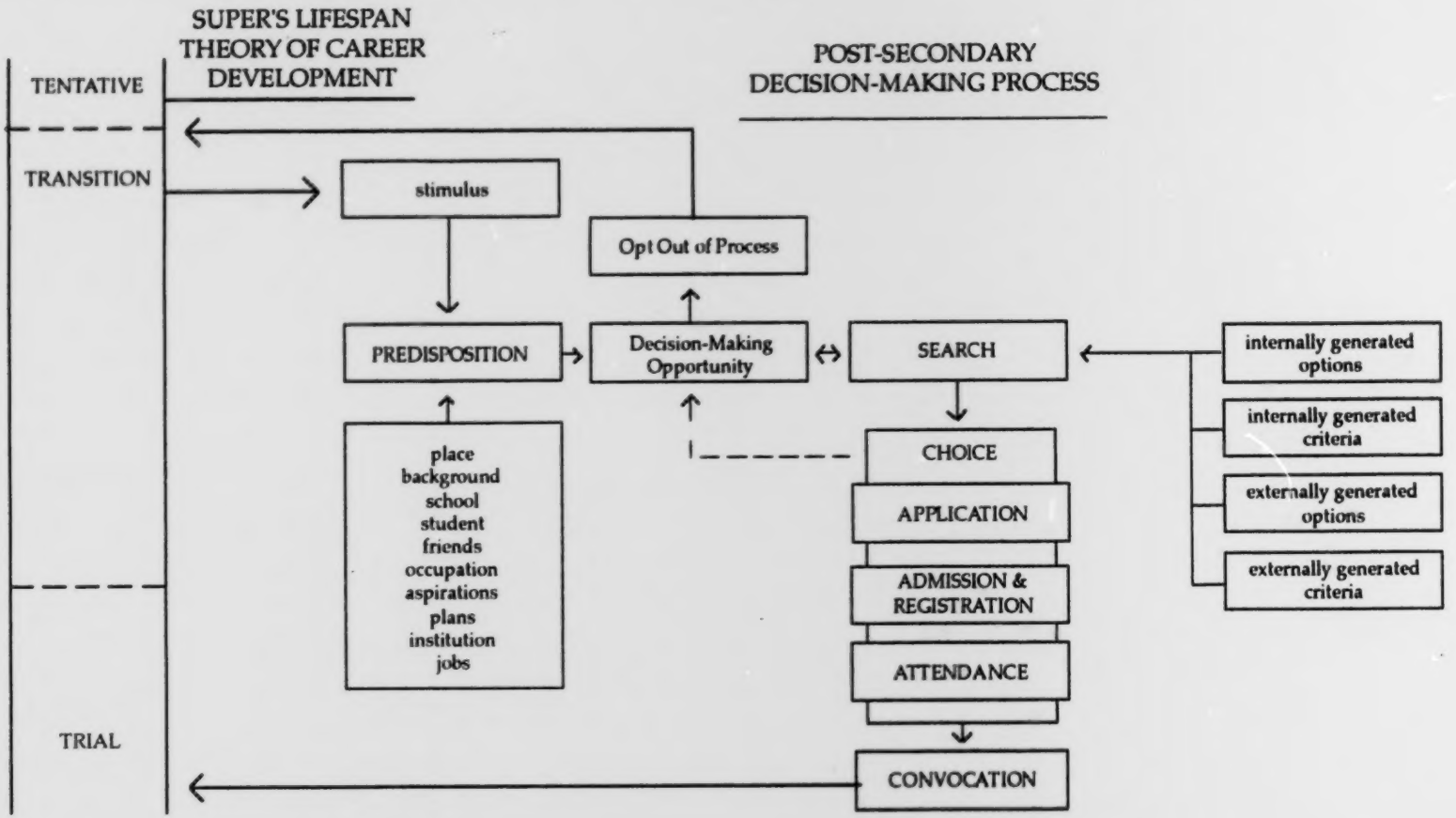
$$\text{Predisposition} = f(P_1, B, S_1, S_2, F, O, A, P_2, I, J)$$

where

P_1 = *Place*—represents the students' hometown and includes factors like location, socioeconomic distribution, labour market, and post-secondary offerings. It provides the broad, common socio-situational context in which the students exist and is a control variable if students are from a common locale.

B = *Background*—represents the more specific details of individual students' upbringing, including gender, parental education, source of income, religion, family background and dwelling area. These characteristics are unique to each student.

Figure 2.1 Post-Secondary Decision-Making Process for Traditional-Aged Students



Adapted from: Chapman, 1986; Engel et al, 1995; Hossler & Gallager, 1987; Mahatoo, 1985; Rachlin, 1988.

S1 = *School*—represents school make-up and includes factors like social composition, curriculum, emphasis on academic achievement, credentials of staff and related attributes. These factors can be common for all students in a school but may affect each differently.

S2 = *Student*—represents how well a student does academically and includes factors like natural intelligence, academic stream, course selection, and grades.

F = *Friends*—represents the immediate social context for students' decisions and what sociologists call peer-group influence.

O = *Occupation*—represents the student's long-term occupational goals.

A = *Aspirations*—represents the student's long-term educational goals.

P2 = *Plans*—represents the student's immediate plans.

I = *Institution*—represents the characteristics of the post-secondary institution(s) available to the student.

J = *Jobs*—represents the non-school options available to the student.

This formulation is supported by Paulsen's (1990) survey of 16 major studies on the formation of college aspirations from 1966 to 1989.

Search

Those students choosing to participate (or at least explore the idea of participating) in post-secondary education move into the search stage. Paulsen notes that the search and application stages can be described in terms of alternatives (institutions), factors (institutional characteristics) and generators (information sources) and may also entail learning about and identifying the right attributes to consider.

Jackson identifies three types of students emerging from the predisposition stage: (1) whiches—those who never seriously considered not continuing their education; (2) whethers—those who will apply to institutions but who may not attend; and (3) nots—those who will not continue their education.

Students start the search phase with an initial list of post-secondary institutions whose names are familiar and represent internally-generated options (Braxton, 1990; Gilmour et al., 1981). Establishing parameters (internally-generated criteria such as cost, location,

program availability, etc.) usually eliminates a number of options. Subsequently, information about additional institutions (externally-generated options) may be sought or imposed upon the student. Strayer notes that this process also expands and refines the post-secondary norms students are aware of (externally-generated criteria). The expanded post-secondary and criteria lists are processed and normally result in several institutions being considered acceptable. The key to understanding the search stage is acknowledging that prospective students are attempting to realize some outcome from attending university (Grove, 1992; Church and Gillingham, 1988; Pain, 1986).

Students' predispositional factors continue to influence them affecting their awareness and evaluation of their post-secondary options (Paulsen, 1990). Jackson suggests that students develop utility functions reflecting their tastes and assess each institution and its characteristics with the goal of maximizing their utility. Chapman (1986) argues that high-stakes, high-involvement nature of the PSDM process indicates an "active and extensive" acquisition of relevant information about multiple options.

In the past, this has seemed unlikely in the Calgary marketplace: few students have the resources to attend institutions out-of-town, particularly when there is a local, full-service university. Further, few traditional-age students demonstrate the ability to carry out a thorough search. Rather, they move to alleviate the dissonance that systemic pressure has foisted upon them as quickly as possible, probably choosing from among the institutions with high levels of name-recognition (Litten, 1979).

The changing post-secondary market is starting to alter this situation. Many students (particularly the wealthy and/or academic elite) do have options to attend out-of-market schools. And those who do not have the personal resources may be inclined to borrow to gain access to schools felt to be superior to local options. Aggressive recruiting by out-of-market schools has expanded the initial choice sets of many students and there are increasing scholarship/bursary opportunities. Additionally, the loss of degree-granting monopoly, the increasing cost of attendance, and a general devaluing of university education in Alberta means that attending the University of Calgary is no longer a near-automatic decision for Calgary high-school students. This is exacerbated by the dualistic desire to make the right choice and may push students toward more complicated choice behavior.

The termination of the Search stage usually reflects that the cost of further search activity (e.g. time, money, effort) does not appear to enhance decision ability. This may occur at the end of an exhaustive search or when constraints (real or imagined) limit the number of options considered realistic and force students into the application stage.

Application (Choice)

The Application stage involves students picking the school(s) to which they are going to apply. Gilmour et al. (1981) note that most prospective students have between three and six schools in mind. The regional nature of the Calgary market argues for the number being three or fewer although students who have options (resulting from personal wealth or scholarship offers) may have a larger application set. The choice component runs concurrently with Application, Admission and Registration, and Attendance because students can opt for another institution or to stop-out/drop-out at any point up to Convocation.

Choice is conceptually problematic in market research: most literature recognizes that consumptive behavior involves more than a single individual's choice but this is difficult to incorporate into a study (Wind, 1978). The variety of relevant respondents, the difficulty in developing dependent multi-person variables which reflect possible incongruence of buying attitudes and goals, and accounting for multiperson independent variables all increase the degree of complexity. Pain (1986) notes 77 per cent of her sample report that post-secondary choice was made by the student; the other 33 per cent made joint decisions (in her population, most likely student-parent). However, this apparent degree of autonomy may be misleading in that the internally- and externally-generated criteria used during the Search stage may be subtly yet significantly influenced by others. Holden's study of parent-child career planning in a Calgary high school indicates a collaborative approach which supports the idea of joint decision making. Murphy (1981) notes a division of authority (81.8% : 17% student-only to joint decisions) similar to Pain's although Murphy highlights the differences between evoked and decision sets, recognizing that influencers may prescribe the application set by outlining constraints (e.g. price range).

Admission and Registration (Choice)

At the Admission and Registration stage, students must choose between the institutions which have accepted them. The choices may not be so clear-cut as students hear from different institutions at different times, possibly forcing students to sacrifice breadth of choice for security (choosing an early responder over a more desirable institution). This may also make the choice process cyclical, re-entered every time a student hears from an institution.

Paulsen found that choice criteria remains constant through all stages of the PSDM process but that weightings changed, shifting the focus from program availability towards location and finally cost. This is logical: program availability would be used to determine initial acceptability while more qualitative criteria (location) are used to rank the acceptable alternatives which are then tested against resource availability. Interestingly, no further information was sought from institutions as attribute importance weightings changed.

DECISION MAKING

Overview

Although students respond daily to vast amounts of stimulus, the bulk of these responses are habituated reactions to recurring problems. Complex decisions—called high-involvement decisions by Mahatoo (1985) and characterized as extended over a significant period of time, often unique or with limited precedent, and involving important outcomes with numerous attributes leading to costs and benefits of differential desirability—are significantly different with more time and energy invested in evaluating more alternatives.

In short, decision making

> ...assumes the presence of a decision-maker, a decision-situation (social expectation) and relevant information from within and outside the person.
>
> Two or more alternative actions are considered and several outcomes or consequences are anticipated from each action. Each outcome has two characteristics: (1) probability or likelihood of occurrence in the future, and (2) value or relative importance to the decision maker.

> The information is arranged according to a strategy so that the decision-maker can readily recognize an advantageous course of action and make a commitment to this action (Jepson and Dilley, 1974 in Harren, 1979).

Pitz and Harren (1980) describe four main elements in decision-making: objectives, choices, outcomes, and attributes. There must be at least two choices (actions one can take) available that lead to different outcomes (uncertain events that may or may not occur as a result of a choice) for a decision-making situation to arise. Objectives are the desired result of the process and are often contradictory or conflicting. How well objectives are met is determined by examining the attributes (individual facets) of each possible outcome. The complexity and ambiguity of this process argues for a trade-off approach to decision-making where decision makers attempt to maximize expected utility. Maximizing utility presupposes predictable outcomes and uncertainty is handled by assigning probabilities (measures of belief of occurrence) to various outcomes.

Dewey's (1910) five-stage problem-solving schema roughly approximates the stages in decision-making:

1. Recognition of problem-solving opportunity
2. Search for and evaluation of alternatives
3. Selection of most suitable option
4. Implementation
5. Post-implementation evaluation

Individuals recognize a problem-solving opportunity and may choose to engage in the process. This may be motivated by the recognized importance of a complex decision or by systemic pressure. Continuing the process will be increasingly influenced by the degree of investment in the process and by the importance associated with the outcome (Beckman et al., 1988).

Searching for and evaluating the available alternatives has several components. The options available and the criteria by which to judge them are generated both internally and externally. Internally-generated options are those alternatives known as a result of prior experiences. Similarly, internally-generated criteria are those evaluative norms (standard of performance in a given function or test) that result from prior experience. Externally-generated options are those that become known through interaction with an

outside source of information (book, conversation, etc.) and externally-generated criteria are those evaluative norms that become known through interaction with an outside source of information (Mahatoo, 1985).

This process results in a series of choices with differentially desirable outcomes with options categorized as acceptable and unacceptable. There is no imperative demanding there be options in both categories. However, if there are no options in the acceptable category, the search must be expanded, criteria altered or the process abandoned.

Decision-maker's perceptions are an edited version of the information gathered about the alternatives and the environment, reflecting conscious and unconscious biases (Rachlin, 1988; Mahatoo, 1985). This is congruent with Pitz and Harren's assertion that information processing is selective and depends upon the interpretation of the task to be performed. Selectivity is tied to the personal domain, thus information must be relevant to be retained with more weight being given to events certain to happen than those uncertain. Current knowledge provides the context in which information is understood and interpreted thus the absence of a relationship between new and previous knowledge makes assimilation of new information difficult. The situational context of decision making in part creates the differential responsiveness that market segmentation (see below) is premised upon (Church and Gillingham, 1985).

Harren suggests that the decision process is characterized by a pattern of alternating exploration and crystallization with recycling common prior to commitment. Private conviction results in trying on the decision for feedback and then (assuming successful resolution) movement toward irreversibility.

There are two main decision-making strategies and the method used reflects the complexity of the alternatives. The decision-maker either completely examines each alternative in turn and then compares them or the decision-maker examines single dimensions (attributes) across all of the alternatives and then combines the evaluations to maximize the resultant utility (Rachlin, 1988). These approaches assume that maximizing utility is of highest import. Chapman (1986) argues that the inclusion of an option in a choice set means that it is at least minimally acceptable thus the next logical step for the decision maker would be to maximize the resultant utility. Super's model argues for a trade-off approach to career planning and its sub-processes: desire for self-

concept expression is necessarily constrained by reality and students attempt to choose the best path from the available, acceptable options.

Engel, Blackwell and Miniard's model of consumer decision-making (Beckman et al., 1988) is a comprehensive representation of the consumer decision-making process from four perspectives: (1) informational inputs; (2) information processing; (3) decision processing stages; and (4) variables influencing the decision process. This model formed the basis of the post-secondary decision-making model.

Ideal-Point, Multi-Attribute Preference Models

Complex decisions made in the trade-off manner can be represented by an ideal-point, multi-attribute preference model (Engel et al., 1995). Each option has multiple attributes leading to costs and benefits of differential desirability to an individual. Overall affect (i.e. propensity to pick one option over another) reflects the net resolution of an individual's cognitions (beliefs) as to the degree to which given options possess certain attributes weighed by the degree or importance of each attribute to the individual. This can be expressed as:

$$Pb = \sum_{n=1}^{n} Wi \mid Ii - Ai \mid$$

where

Pb	=	degree of preference for an option
Wi	=	the importance of attribute i
Ii	=	the ideal performance of attribute i
Ai	=	belief about the option's actual performance on attribute i
n	=	number of salient attributes

Preference is "...a person's enduring favorable or unfavorable evaluations, emotional feelings, or pro or con action tendencies toward some object or idea" (Beckman et al., 1988) . Preferences are formed over time through individual experiences and group contacts and are highly resistant to change, reflecting individual's self-concept and reference-group norms (Trout and Rivkin, 1996). There are cognitive and affective components to preference: a person's knowledge and beliefs about an object reside within the cognitive component while a person's feelings about an object represent the

affect component. Combining these, results in action or behaviour tendencies towards an object (Engel et al., 1995).

The ideal-point, multi-attribute preference model offers advantages over non–ideal point models because it provides a complete picture of consumer motivations thus making interpretation easier (Pope, 1993). Attributes can be important for varying reasons: consumers may rate an attribute important because they want the product to have it or because they want the product not to have it. This confusion can be avoided by measures that require evaluation of ideal levels of attributes (Cohen, Fishbein and Ahtola, 1972).

Post-secondary education meets Wilkie and Pessemier's (1973) definition of a multi-attribute object as being a bundle of attributes leading to costs and benefits of differential desirability to individuals. It also meets Hughes' (1971) measure of appropriateness: the product must be of significant importance to the consumer, representing significant financial, social or psychological risk (Mahatoo, 1985), and the decision-making period must be extended.

Cook and Zallocco's (1983) use of a linear-compensatory, multi-attribute model to predict university choice highlights the applicability (and reliability) of these models in marketing higher education. Their work is based upon the summative models originally proposed by Rosenberg (1956) and Fishbein (1967).

MARKET SEGMENTATION

Overview

Market segmentation recognizes that consumers are differentially responsive to particular product and service characteristics, can be reached through different media, and can be appealed to through different promotional programs and content (Litten, 1979). Market activities based upon differentiated models that target the needs of groups of similar individuals will be more effective than general approaches. However, ascertaining commonalties is equally important as standardized recruiting efforts are cheaper than differentiated ones (Litten, 1982).

Market segmentation divides a market into distinct and meaningful groups of buyers who merit separate products and/or marketing mixes (Engel et al., 1987; Green and

Tull, 1978). While finding a single marketing solution has greater social sanction, segmentation provides a good compromise: some of the uniqueness of each person's progression through the PSDM processes is retained but balanced by the usefulness of a manageable number of relatively homogenous consumers groups (Church and Gillingham, 1985). Wind (1978) describes cluster-based segmentation (via factor analysis) as finding a basis for identifying segments and then determining appropriate ways of targeting that segment with products or promotional strategies.

Segmentation makes several assumptions about markets (Green and Tull, 1978): (1) differences within a single market exist; (2) those differences can be identified; (3) those differences are reasonably stable over time; (4) homogenous groups within a market can be identified; and (5) marketing performance can be enhanced beyond its levels when market homogeneity is assumed.

These assumptions are incongruent with the culture of public institutions: for-profit firms can choose to concentrate on specific target segments whereas public institutions are mandated to serve everyone (on a limited budget) thus they try to develop single policies aimed at all customers. Segmentation also violates the inside-out perspective of the academic culture where examining the needs of a customer (or even calling a student a customer)—an outside-in approach—challenges the Aristotelian tradition of a liberal education (Grove, 1992; Elias and Merriam, 1984).

Benefit Segmentation

Benefit segmentation (i.e., determining what motivates students to participate in the university) can yield significant marketing advantages: identifying groups with common and discrete benefit expectations provide the basis for better informed interventions in the PSDM process (Chen, Barlar and Sjolander, 1989; Braxton, 1990; Maquire and Lay, 1981; Litten, 1979). Segmentation can be based on many characteristics (e.g. sex, ethnicity, location, lifestyle, etc.) but benefit segmentation recognizes (1) the logistical difficulties of The University of Calgary attempting to run numerous demographic-based marketing plans inside the small market Calgary high-schools present and (2) that attending university entails significant opportunity costs and attendance must therefore be primarily motivated by the pursuit of some benefit and require only an appropriately packaged product to precipitate the buy (Grove, 1992).

Given Gilmour and colleagues' (1981; Tierney, 1983) finding that the PSDM process is neither well executed nor well informed, benefit segmentation allows a university to better address the needs and interests of important segments thus favorably positioning itself compared to the less relevant information in other institutions' messages. Further, retention is based in part on the congruence of students' expectations and experience: identifying students' expectations means their experience and/or expectations can be modified to enhance congruence thus retention.

The two main strategic choices related to segmentation are: (1) marketing tool variables—what is an appropriate marketing mix; and (2) methods of targeting marketing efforts—how can tools be directed to one segment as opposed to another (Frank, Massy and Wind, 1972). The ultimate goal of benefit segmentation is to achieve congruence between product structure (attribute levels) and functional-symbolic appeals (uses of the product) in each identifiable group of consumers with minimal cost (Green and Tull, 1978).

An appropriate strategy for a public institution is developing motivational profiles for several large segments and attempting to target a small number of commonalties to evoke a specific, broadly acceptable message. The information available about each segment can also be used to enhance the effectiveness of specific recruiting efforts (i.e., What really does appeal to students with averages between 65 and 70 per cent?).

Benefit Dimensions

Benefit dimensions assume that there are a number of identifiable and homogenous reasons that significantly impact students' decisions to attend university. These dimensions interact with (and are a product of) students' backgrounds to create the differential responsiveness that Litten (1979) says creates the need for specific marketing activities. Dimensions will reflect the outcomes students are seeking from university (Grove, 1992). Examining what motivates students to attend university diverges from much higher-education research on motivation which focuses on quantifying motivation (i.e., How motivated are they?) (Stage and Williams, 1988).

Questions of motives for participation in adult-education literature came to a head in Houle's 1961 typology where he identified three main orientations: (1) goal-oriented

learners; (2) activity-oriented learners; and (3) learning-oriented learners. Johnstone and Riviere's 1965 investigation broadly supported Houle's typology (Merriam and Caffarella, 1991). This was followed at first in New Zealand (N=233) and later in Canada (N=242) and the United States (N=611) by Boshier's (1977, Morstain and Smart, 1974) attempt to refine and support this typology with the Education Participation Scale (EPS).

The standard factor solution to the 40-question instrument identifies six motivational dimensions (Merriam and Caffarella, 1991):

1. *Social relationships*—this factor reflects participation in order to make new friends and expand the respondent's social circle.
2. *External expectations*—these participants are complying with the wishes or directives of someone with authority and tends to correlate with the professional-advancement dimension.
3. *Social welfare*—this factor reflects an altruistic orientation: learners are involved because they want to serve others or their community.
4. *Professional advancement*—this factor is strongly associated with participation for job enhancement or professional advancement.
5. *Escape/stimulation*—this factor is indicative of learners who are involved as a way of alleviating boredom or escaping home or work routines.
6. *Cognitive interest*—these participants are engaged in learning for the sake of learning.

These dimensions also broadly support Houle's hypothesis, although they suggest that motivation is more complicated than initially believed. The difference between Houle's typology and the results of the EPS illustrate the difference between benefit segmentation and dimensions: segments describe groupings (types) of people while dimensions describe groupings of reasons.

The EPS can be explained in the context of Maslow's hierarchy of needs and Boshier identifies two main groups of participants: those with a deficiency motivation (seeking to meet physiological, safety, love and belongingness, and/or esteem needs) and those with a growth orientation (seeking self-actualization).

Stage and Williams studied the applicability of the EPS on frosh students (N=415) at an unidentified American university during the first two weeks of classes. The results strongly correlated with Boshier's and Morstain and Smart's results with only a few items (weakly correlated in the original study) refusing to load into the expected factors. Of note was the formation of a seventh factor they titled *change* and indicated that students sought an experience "contrasting with the rest of their life."

Other reports of market research in post-secondary education (Chen et al., 1989, Paulsen, 1990) report segmentation based upon demographic or geographic characteristics and/or the use of other techniques (multi-dimensional scaling) to assist institutions in understanding their prospective-student populations. Church and Gillingham (1988) report the only Canadian study available in the past 10 years and categorize these benefits into five dimensions which they posit underlie students' reasons for attending Laurentian University.

1. *Personal skills development*—activities related to developing skills and competencies together with developing greater personal insight.
2. *Personal advancement*—including the desire for an improved standard of living, the desire for career opportunities or simply wanting a degree.
3. *Relieving social pressures*—consisting of heterogeneous indicators related to various forms of social pressure to attend university.
4. *Learning and discovering*—including the desire for greater personal insight, learning about new things and wanting to meet new and interesting people. It may also indicate that students are seeking to delay career decision-making until they have had time to discover more about their interests.
5. *Intellectual development*—representing students' desire to discover their favorite subject, increase knowledge and understanding, and whether they enjoy learning about new things.

Church and Gillingham's study consisted of two sets of questions: (1) 19 Likert statements measured students' perceived benefits of attending university and were used to determine benefit dimensions and for benefit segmentation, and (2) 19 Likert statements explored the importance students placed upon institutional characteristics

during the choice stage and were used to further describe the benefit segments. Other questions collected information on demographics.

Church and Gillingham's work is echoed in a University of Calgary Office of Institutional Analysis (1995) report summarizing the reasons frosh enrolled (see Table 2.1). The reasons of mature students cited in the same report were very similar to those of frosh, but also included "broadening one's knowledge" and "enjoying taking courses".

Table 2.1
Primary Goals of University of Calgary Frosh at Entry and After One Semester

Goal	Entry (%)	After One Semester (%)
To prepare for a career	35.5	25.6
To earn a degree	31.1	31.4
To sort out what I really want to do in life	14.7	24.9
To develop intellectually	10.9	10.9

Note: Percentages do not add up to 100 due to truncated responses in original report.

Dixon and Martin (1991) describe an American approach to motivation in the PSDM process, but incorporate the social and recreational motives that students may have for attending university missing from Church and Gillingham's study.

6. *Pursuing recreational/social activities*—revolving around universities offering recreational/social activities that may influence students' decision to attend. This may overlap with 4 (above) given that much of the attraction of recreational activities is based on meeting new people—although this may have a decidedly non-intellectual focus.

They also note that a family tradition of attendance can influence the PSDM process; this is largely irrelevant, reflecting neither western Canadian norms nor the role of regional university, although tradition may affect the choices of students whose parents were schooled in central or eastern Canada.

The benefits sought by subjects in Marantz Connor, Miawer, Parsons Rabbiner and Sanders (1988) broadly support these six dimensions and noted minimal sex

differences. These six dimensions are also supported by discussions with liaison staff from several institutions in Alberta. Both Dixon and Martin and Marantz Connor et al. note the moderate importance of leaving home; the parameters of this study (Calgary-based students attending a local institution) eliminate this as a major dimension.

Institutional Characteristics

Numerous bi-polar perceptual characteristics of institutions are identified by the literature as important to high-school students' judgments of institutions (Litten, 1982), however, there is little agreement (beyond basic factors like location, size, price, and program availability) about what specifically they are (Paulsen, 1990). The Canadian literature is largely bereft of discussion reflecting the now defunct sellers' market.

Paulsen's examination of 10 studies on college attributes from 1979 to 1987 suggest that location, quality, social life, cost, financial aid, program availability, size, athletics, job opportunities and religion are important in that order.

The primary purpose of measuring students' perceptions about institutional attributes is to enhance the description of various benefit segments. Subsequently, these measures can also provide some direction for possible manipulation (either by changing the characteristics or communicating to prospective students about them differently) of these characteristics to enhance the congruence between students' expectations and perceptions of The University of Calgary. Selection of institutional characteristics to examine should then be guided by three main criteria. The institutional attribute must:

1. enhance benefit-segment description;
2. be a perceptual characteristic; and
3. be manipulable (either in reality or in communication).

Given these criteria, a profitable approach would be to measure a variety of institutional characteristics and develop a picture of how students conceptualize The University of Calgary and compare this to an ideal university rated on a similar scale. Appropriate characteristics suggested by the literature, and focus groups with Calgary students and discussions with Alberta high-school liaison personnel include: political leanings, appearance, friendliness, international activities, student involvement, size, modernity,

academic flexibility, simplicity of regulations, reputation, quality of education, costs, academic rigor, and selectivity.

SOCIAL CONTEXT OF CURRENT AND FUTURE FROSH

Media fascination with the concept of age-based cohorts (e.g. the Boomers, Generation X) has served to bring demography (and its importance in marketing) into the popular-culture marketplace. However, examining the cultural phenomena—from the pervasion of television and the decline of the family to the extension of adolescence—that underlie the rhetoric provides insight into the perspective frosh bring to their purchase decisions. Reports of the Canadian experience (awash in a sea of American material) have been isolated and American literature has been used only when it can be corroborated.

Boomers and Busters and GenX, Oh My

The generations relevant to recruiting students in the '90s are four:

1. The Blessed Ones (born 1930 –1945) are the Depression and Second World War babies whose success is often bitterly characterized as based on having a grey suit and a pulse. Their cohort is small compared to the baby boom that followed the war (Howe and Strauss, 1991).

2. The Baby Boomers (born 1946–1966) cohort resulted from a huge increase in the birthrate following the Second World War. A major generational split has occurred between the Boomers and those that have followed them because the structure the Boomers grew up with provided them with criteria for making discriminating judgments. This included a larger role for organized religion and a tighter family structure (Bibby and Posterski, 1992).

3. The Baby Bust (born 1967–1979) cohort were born to Boomers and Blessed Ones in approximately equal numbers. Their name is derived not from the size of their cohort (which is equal to that of the Boomers) but to the decline in birthrates during the years they were born (Romaniuc, 1984; Holtz, 1995).

4. The Echo Boom (born 1980 to present) cohort, born to both Boomers and Busters, will form the basis of frosh classes in the foreseeable future.

Segmenting a population based on isolating cohorts (: emerged from a common cultural ethos lacks precision. Most difficult is the evolving nature of generations, based on both their aging and the interaction of their collective and individual backgrounds with the ever-changing social reality they experience. Also of note is the blurring of generational boundaries with the tail of one generation often experiencing many of the influences of their successors and thus resembling them. Despite this, classifying and characterizing generations and the experiences they bring with them allows researchers to better understand and predict the benefits the Baby Busters and Echo Boom will seek from attending university and their reaction to recruiting strategies.

Social Trends Affecting Emergence

Fundamentally affected by the circumstances of their emergence into adulthood, the attitudes of the Bust and Echo cohorts (as documented in University of Lethbridge researchers' Reginald Bibby and Donald Posterski's three surveys of Canadian youth in 1984, 1988 and 1992) provide us with a glimpse into the perspectives of potential university students. In their 1992 results, Bibby and Posterski note that numerous cultural contradictions are sabotaging youth's aspirations to marriage and maintaining their standard of living. Of particular note is the strong pull of individualism and thus away from collectivity.

The major institutions affecting current and future frosh are television, the family and state-driven schooling (Bibby and Posterski, 1992, 1985); the impact of organized religion is negligible with only 18 per cent of teenagers reported as attending religious services. Each of these mediums has prepared this cohort to be highly autonomous, self-oriented and self-sufficient. However, excessive individualism is antithetical to good relationships (given the inevitable conflict between the personally desirable and relationally necessary) and has reduced the inclination of Busters and Echo Boomers to commit to family life.

This is evidenced by Bibby and Posterski's 1992 finding that 72 per cent of teenagers put a high value on cleanliness while forgiveness garners only 59 per cent and generosity 40 per cent. Key components of friendship, the scores for generosity and forgiveness are inconsistent with the high value ascribed to friendship (91 per cent rated it as very important) and being loved (80 per cent). This disjunction between expectations and

values stems from four social trends affecting this cohort: the disintegration of the family, the extension of adolescence, the transformation of the Canadian identity, and the pervasion of television.

Disintegration of the Family

The Canadian family—the primary unit of socialization—has been in retreat since the late 1960s. Throughout the key stages of personal development, there has been increasingly less support available to the Busters and Echo Boomers.

Divorce rates in Canada sextupled between 1966 and 1981 from 200 in 100,000 to 1200. Prior to 1986, 52 per cent of divorces involved children (Adams, 1990). Families attend to children's material needs, including physiological and safety needs. They also attend to the psychological needs, including security, love and esteem. These needs are key components of developing autonomous adults with the early years impacting personality development and providing the basis for subsequent intellectual and emotional capacities (Nett, 1988). Marriage breakdown significantly affects the third through fifth needs in a variety of ways over a long period of time, including changing financial circumstances, violating expectations, and destroying preconceptions about relationships. In *The Canadian Family in Crisis*, Conway notes that adolescents—those aged 13 to 18—suffer the most.

> They express greater worries about sex, future marriage, degrees of intimacy and the nature and extent of emotional commitment. They reveal a profound sense of anger and loss and are torn by conflicting loyalties. All this leads to a greater risk of serious delays in their normal psychosocial development and maturation.... These negative effects of divorce tend to persist into young adulthood. Studies have suggested that young adults with divorced parents tend to be explicitly anxious about their marital futures, less likely to want to have and raise children, and more prone to postpone marriage (Conway, 1990).

Some of this anxiety about impermanence must be transferred to children in two-parent families both through personal contact and television. The adult failure and unhappiness that are concomitant with divorce are now a part of the children's reality thus prematurely shattering their dualistic perceptions about child-parent relations. Without the cognitive structures necessary to cope with this ambiguity, permanent insecurity about relationships and the judgment of adults can result.

Women rejoining the labour force have further reduced the support available to children. Nearly half of all children from traditional families have both parents working, close to double 1967 levels (Moore, 1990). Combined with a rise in single-parent families, it seems reasonable to conclude that there has been a significant decline in the time parents have available for children starting in the late '60s.

The multi-dimensional emergence into adulthood that teenagers experience requires two basic contributions from adults: direction and room. While society has met the *room* requirement over the past 30 years, it certainly hasn't met that of *direction*.

> Much of what they are experiencing is new, and they desperately need information and occasional advice. They also need to know where there are limits to what they are allowed to do, at home, in school, in their time spent with each other (Bibby and Posterski, 1992).

On the sphere of interpersonal relationships, the consequence of absentee parents and a lack of direction is a transfer of allegiance from adults to peers. Bibby and Posterski's surveys show a consistent paradox: teens supremely value relationships but frequently do not have good ties with adults. This is evidenced by the low enjoyment teens derive from schools, jobs and organized religion—all adult-dominated activities.

Extension of Adolescence

The extension of adolescence is not unique to Canada but is a phenomena observed in many post-industrial countries. Prior to industrialization, there was little or no period of enforced and prolonged dependency: the entire concept of being a teenager is a social construction designed to compensate for reduced labour needs following industrialization (Coté and Allahar, 1994).

The shift to a post-industrial, service-based economy has meant falling wages for young people (Rifkin, 1995). As the Baby Boomers approach mid-life, it appears that they are consolidating their economic positions (their earnings are rising) while the earnings of those aged 16–24 are falling. Part-time work and industrial restructuring towards more service-oriented and low-skill jobs has meant that the median weekly earnings of full-time, Canadian, working males, aged 16–24, as a percentage of the median earnings for all workers, has fallen from 94 per cent in 1967 to 69 per cent in 1984 (Wannell, 1990). This same group (16–24 year olds) has the highest rate of unemployment

(unemployment figures only include those actively seeking work, excluding those who have given up looking and those engaged in other activities e.g. schooling, parenting, etc.). Nationally, in 1987, unemployment for men (16–24) hovered around 14.7 per cent while for women (16–24) was over 12 per cent. Women 24–44 were at 9 per cent unemployment while men in that age range were at 7 per cent (Gower, 1990). Media reports of more recent unemployment figures have confirmed this disparity.

In order to exit this job-ghetto, educational credentials are required (although practically unnecessary for most jobs). The normative pressure credentialism has exerted means an increasing prolongation of youth. Those unable to gain entrance to post-secondary education will necessarily remain here with their dreams and aspirations—along with the basic status and sense of independence associated with this age—unfulfilled (Coté and Allaher, 1994). However, education isn't the panacea it once was and underemployment may come to be the most serious problem for Canadian youth (Rifkin, 1995); Krahn and Lowe's (1982) study showed one in four university graduates were reporting clerical, sales or service occupations in year three of their survey. There is evidence that the classroom–work transition has not completely broken down, rather it has simply become more circuitous and difficult. With the increased creation of part-time, low-paying jobs in the service sector, the chances of eventually entering a rewarding career path may have been reduced. The majority of Canadian youth continue to believe in higher education and act accordingly. This belief, reinforced by a very strong individualistic value system that identifies higher education as "the way to get ahead", may be an important stabilizing factor.

Coté and Allahar (1994) note that the irresponsibility attributed to Busters and Echo Boomers may be the outgrowth of frustration at their social stasis. "Maturity and responsibility are qualities that are acquired through experience and practice. They cannot be gained by reading textbooks and through classroom instruction alone."

Transformation of the Canadian Identify

Related to the extension of adolescence and changes in the job market is the significant shift pollster Angus Reid (1996) notes in the Canadian identity. Alberta's Klein revolution provides University of Calgary frosh and local high-school students with front-row seats to what Reid refers to the sink-or-swim mentality of the 1990s. This is in contrast to the spend-and-share ethos of the 1960s and '70s. The consistently high levels

of unemployment, the shift of debt from public to private, the constant media coverage of entrepreneurial activities and, perhaps most importantly, the decline of universal health-care, are re-shaping how Canadian view themselves.

Reid says that the big-government era of the 1960s–'80s was characterized by unbound confidence in government, the sexual revolution, lust for material possessions and soaring optimism. The 1990s—shaped by an aging population, ruthless global competition and technology—brings with it suspicion of government, AIDS, unemployment and pessimism. In a recent international poll, Canada tied for third as the country most pessimistic about the future.

Changing the basic rules and patterns that ordered the lives of Canadians has created a society where unrestrained self-interest (the fundamental principle of neo-conservativism) is the highest ideal. The erosion of Canada's public infrastructure through user fees, budget cutbacks and privatization has created a defensive society where self-preservation is the most important goal. This is reflected in the values held by the Busters and the Echo Boomers.

Pervasion of Television

The importance of television is perhaps the one variable unique to post-Baby Boomers: no earlier cohort has been affected by it as much. Winn (1981) argues that the content of television is less important than the role it has assumed in raising children.

> ...The television's mere presence in the home has worked to alter children's lives in ways that have absolutely nothing to do with what they might be watching. Its easy availability as a child amuser, baby sitter and problem solver has altered long-established child-rearing patterns, allowing parents to co-exist with their children without establishing the rules and limitations that parents once had to impose on children simply for survival's sake.

Television is an essentially solitary activity that creates the illusion of interaction with a multitude of interesting people whenever it is convenient for us to tune in. The elements of generosity, forgiveness, patience and hard work that exist in relationships are neither necessary to interact with TV nor do they make good material for plots.

"Interpersonally, we have bought into the idea that relationships should add to our lives," assert Bibby and Posterski (1992), "and, if they don't, should be dispensed with

in favour of more fulfilling ones. Alternately, if none are forthcoming, we should bask in positive solitude."

But despite the individuality of the activity, the messages on television affect literally millions of people. Cultural norms are established without discussion or reflections. Television has also been instrumental in trumpeting the downfall of society's traditional role models. Ben Johnson made us suspicious of sports heroes. Trudeau spent our inheritance; Mulroney was corrupt and inept. *The Boys of St. Vincent* and the residential school scandals have disgraced the priesthood. Talk shows routinely ridicule (and at the same time glorify) a multitude of dysfunctional families headed by flaky adults. *Roseanne* turns the tragedy of being on the backslope of the economic bell curve into a comedy while *Cheers* shows that desperately lonely alcoholics are fun people too.

Citing a *New York Times Magazine* article, Holtz's 1995 book *Welcome to the jungle: The why behind generation X* vividly brings across the mistrust and frustration (and values) of the Echo Boomers and could be just as easily applied to Canada:

> The baby-boom generation has crippled our economy with 13-digit debt, depleted our natural resources, permitted our infrastructure to decay, eliminated all standards of common decency, and created a war machine capable of liquidating millions of people in a matter of seconds.

Cognitive Development

William Perry's (1970) scheme of cognitive development (designed to document the undergraduate experience of students from the mid-'50s to the mid-'60s at Harvard) tracks the psychological progression from simple duality to commitment in relativism. Field Belenky, McVicker Clinchy, Rule Goldberger and Mattuck Tarule (1986) persuasively question the applicability of Perry's model to women which should be heeded in reading the following description that may apply best or only to men.

Cognitive structures are sets of assumptions that act as filters, dictating how individuals perceive, organize and evaluate events in the environment and how they respond. Making sense of change in Perry's model is based on assimilation and accommodation. Assimilating emerging forms of experience to the forms of experience one brings to a situation is usually an unconscious action, taking place through selection, simplification and/or distortions. More explicit is accommodating the forms of expectancies to the

form emerging in the experience. This takes place through recombination and transformation that results in new forms of expectancy. Movement between one position in Perry's scheme and another involves the reorganization of major investments.

The Busters and Echo Boomers (personally and vicariously) have been exposed to a greater number of duality-incongruent events than the generations that preceded them because of the advent and pervasion of television, thus it seems reasonable to suggest that they may progress differently through Perry's scheme. The post-JFK generation collectively lacks the strong emotional attachment to authority (embodied by the parents, teachers and television) because it failed to tell them right from wrong in exchange for obedience and thus betrayed the fundamental dynamic of duality. However, as authority loses ground against their experience, there is a way out of their increasingly untenable position in the quasi-legitimate world of multiplicity. Here, post-Boomers can escape from their responsibility to reason through detachment, allowing the intellectual space they need to successfully reformulate their world. Hurtled through the first stages of duality, Busters may find the solace that they need in this sort of evasion of responsibility and thus plateau here longer than their parents would have. This allows the Busters and the Echo Boomers the opportunity to impact their world without having to waste energy maintaining the system and managing how they impact the system.

Perry's model attempts to account for this feeling of alienation by providing structures for temporizing at a stage or even escaping by exploiting detachment in the deeper avoidance of personal responsibility. However, because he could find so few cases of this in his subjects, he treats this area as theoretical. The socialization of the Busters and Echo Boomers makes temporizing and escape very real. Fortunately, the solution to this may lie in Perry's original assumption that even alienated people feel some sort of guilt when they give up: there is some innate drive towards self-actualization.

Impact on Purchase Behaviour and Motives

The Baby Bust and Echo Boom generations are generally thought to:

- place a high value on relationships but have poor relationships with adults;
- subscribe to an ethos of personal fulfillment, particularly related to personal relationships;

- have (and perceive) a bleak future characterized by un- and underemployment;
- see education as a way out of the job ghetto;
- be frustrated by their relative powerlessness, often manifesting cynicism and/or laziness;
- be self-interested to the point of neglecting collective responsibilities; and
- have a weak emotional attachment to the structures, systems and values that their parents' regard as important and valuable;

The subscription to an ethos of personal determinism means that frosh may internalize both their successes and failures while largely ignoring the impact of environmental factors. Their oscillation between dependence (on their parents and employers) and independence precludes considering interdependence as a valid perspective: The Busters and Echo Boomers aren't able to achieve the prerequisite economic and social independence for this natural rapprochement.

The dissonance created when their development pathway is barred by economic constraints motivates their characteristic pursuit of autonomy. Seeking economic self-sufficiency—the main response—is the result of the insecurity most face in the recessionary and increasingly volatile job market. At the same time, the innate desire for connection and self-esteem building relations provides a contradictory drive. Many having experienced loose-knit or non-existent families may turn to their peers as a source of love and security. This desire for connection may strongly motivate students to enroll. University provides a large number of young adults (already processed through selection and self-selection) who may fill a student's need for social interaction and support.

A by-product of the Echo Boomer's desire for economic security may be self-absorption (and even selfishness) because seeking meaning and serving the community plays no part in the reward structure (i.e. becoming socially and financially independent). This myopia may be manifested in cynicism and pragmatism: standing on principle is neither rewarded nor an ingrained habit and they are comfortable cutting a deal to maximize their gain. This short-term perspective reflects both the cultural relativism of their upbringing and the rapidity of change that is out-stripping the ability of traditional, formulaic value systems to cope with novel demands.

SUMMARY

The literature broadly supports the idea of segmenting a post-secondary market based on benefits sought. Attendance is in expectation of a benefit or solution to a problem thus appealing to these desires should improve the effectiveness and efficiency of marketing strategies. However, the implications of segmentation run counter to the academic culture at the university, both framing on the student-institution relationship as transaction and suggesting that the idea of a standardized consumer is inadequate to cope in a competitive market.

Benefit segmentation is relatively unexplored in Canada and, similar to situation in the United States, it seems unlikely that as institutions gear up to actively recruit that they will be sharing their findings. This argues strongly for The University of Calgary to conduct a study of its primary markets to enhance the effectiveness of its current interventions into the post-secondary decision-making process.

Because the PSDM process is a high-involvement consumer decision, business models form an appropriate conceptual basis for understanding student behaviour and how their background impacts both the outcomes they are attempting to realize and what they consider to be important institutional characteristics. The PSDM is really a sub-process of career development but is poorly developed in career development literature.

The actual institutional choice process appears to be based on an economic model where students maximize the utility they obtain from the options they have. This means institutional characteristics can be conceptualized by using a multi-attribute, ideal-point preference model. Combining biographical information with measures of benefit dimensions should result in market segmentation. These benefit segments can then be further fleshed out based upon the institutional characteristics students select as important and how they rate both an ideal institution and The University of Calgary.

The characteristics of post-Boomer students are a result of the circumstances of their emergence into adulthood. The social trends affecting the Bust and Echo-Boom cohorts may result in significant differences between socially sanctioned motives for participation and their actual reasons for attending university. This will be of particular concern because of the generational and motivational homogeneity of university faculty.

CHAPTER THREE—METHODOLOGY

This chapter outlines the methodology employed to determine the benefit dimensions and segments in the sample. First a rationale for the use of quantitative, survey methodology will be used. Subsequently, research procedures will be explained, including discussions of the sample, instrumentation, the semantic-differential technique, data-gathering procedures, and the techniques for data analysis.

QUANTITATIVE SURVEY METHODOLOGY

Rooted in positivism, quantitative research can be defined as "a family of philosophies characterized by an extremely positive evaluation of science and scientific method" (Reese, 1980 in Wiersma, 1995). The assumption that life is regular (as opposed to random) means that logical and persistent patterns can be documented in a probabilistic manner (allowing for exceptions). The aggregation necessary for social-science research is a source of significant concern, blurring the unique combination of traits and circumstances that influence individual decisions (Babbie, 1992).

Non-experimental quantitative research, with the simultaneous operation of numerous variables in a natural setting, uses statistics to tie together the logico-empirical basis of science and verify if the observed match the expected (Babbie, 1990, 1992). Survey research permits the testing of complex propositions involving several variables in simultaneous interaction with a population that can then inform policy decisions.

Benefit segmentation both segments the market and creates descriptions (motives, institutional characteristics sought, biographical information) of those segments that can be used to develop segment-specific marketing strategies. The empirical nature of survey research provides a more representative and efficient approach for studying aggregate motivational patterns than a qualitative method like focus groups: although this study initially appears to be asking why questions (where qualitative methods excel), it is in fact asking what (given these motives for participation) is the segmentation.

This quantitative approach has come under scrutiny from post-modernist scientific theorists such as Fritjof Capra (1996) who states that the Cartesian assumption that complex systems can be understood wholly as functions of their parts may be an inadequate conceptualization. Capra argues that reductionism is ultimately pointless in that system components (from subatomic particles to mail-room employees) cannot be

understood (and are in fact meaningless) outside of the context of their system. An atom is a relationship between subatomic particles and the particles themselves have no meaning outside of the atomic relationship: a neutron that is not a part of an atom is not anything and cannot be conceptualized because the basis of conceptualizing is forming relationships between components.

Similarly, humans are components of systems and attempting to understand them outside of the context of their system(s) is not possible: a lawyer without a legal system to frame him or her loses definition and can only have meaning (thus be discussible) when reconceptualized in another context (e.g. as a human being with brown hair). Examining facets of humans (e.g. their motives) will fail to fully represent the dynamic interactions that make the system more than the sum of its parts. If reductionist approaches cannot then yield final components that can be isolated and analyzed, only approximate and limited knowledge (as opposed to specific knowledge) is possible. This significantly devalues a quantitative approach to examining human motivation. However, the inability to achieve perfection should not be the enemy of the potential good resulting from research and quantitative research has value as a method of generalizing relationships such that informed social policy can be made.

Babbie (1990) further elucidates limitations of statistical studies in the social sciences, noting in particular that: (1) sampling assumptions are virtually never satisfied; and (2) statistical techniques are often applied in violation of the assumptions that underlie them (most commonly, ordinal data is treated as interval). However, he goes on to say the value of using inappropriate statistical tests to further understand data may be high enough to warrant their use. The cost of this data-dredging approach is a loss of confidence in the statistical results and a complete reliance on circumstantial arguments to make a case for or against the validity of findings.

This presupposes that it is necessary to classify statistics procedures by the type of data appropriate for use with them. Lorr (1983) reviews this assumption. The arguments supporting it state that measurement scales are models of entity relationships and the more the model deviates from the objects measured, the less accurate the statistics become. Equally convincing is the other side that argues statistics apply to numbers rather than to things thus the formal properties of measurement should have no

affect on the choice of statistical procedure. The implication of the latter argument is that parametric statistics can be used when interval-scale data cannot be demonstrated.

The compromise I have chosen is to use parametric statistics wherever there is not a non-parametric option in order to best understand the data and the relationships within it. This is based on: (1) evidence that semantic-differential data closely resembles interval data; (2) the methodology I have chosen to employ (factor and cluster analysis) always yields a solution (the validity of the solution based solely upon its interpretability); and (3) the value of a properly reasoned outcome outweighs the disadvantages of violating parametric rules.

QUESTIONS

While confirming the benefit-dimension model Church and Gillingham developed for Laurentian University students and developing a benefit segmentation of the University of Calgary's frosh class, this study answers four questions:

1. What typology based on benefits sought from participation emerges among first-year University of Calgary students and is this congruent with Church and Gillingham' s analysis of benefit dimensions?

2. What is the optimal clustering (segmenting) of the frosh class based upon the benefit typology developed?

3. How can each benefit segment best be described by biographical information, motives for participation and perceptions of institutional characteristics?

4. Are there important benefit-segment differences/commonalties that can be used to increase the efficiency and effectiveness of the University of Calgary's recruiting practices?

THE SAMPLE

The population is first-year University of Calgary students (frosh) who graduated from Calgary high-schools in June 1996. This group included approximately 2340 students who made up 72 per cent of the university's incoming frosh class and 45 per cent of new

male and female students (frosh and transfer) attending the university. These students tend to be young (17–19 years old) and living at home.

The sample comprised three hundred students randomly selected by the Registrar's Office to receive questionnaires. This number was based on desiring to have 5–10 cases for each cell in the factor and cluster analyses. Seventy-eight usable questionnaires were return but software conflicts resulted in only 77 cases loading for the factor and cluster analyses. This has been noted where applicable in the text. Two respondents may have been older than anticipated based upon their responses, but both were retained in analysis.

INSTRUMENTATION

The survey questionnaire is based upon a review of the relevant literature (Dixon and Martin, 1991; Paulsen, 1990; Church and Gillingham, 1988; Marantz Connor et al, 1988; Chapman, 1986; Cook and Zallacco, 1983; Chapman, 1981; Jackson, 1978), and five informal focus groups (four with first-year students and one with student recruiters from several institutions).

The questionnaire is divided into three segments: biographical information, reasons for attendance, and measures of institutional characteristics. An initial pre-test (n=14) and additional research into semantic-differential techniques yielded a second, revised questionnaire (See Appendix One). Significant differences included a re-working of the institutional-characteristics section and an expansion of the reasons for attendance drawn from Boshier's Education Participation Scale (Stage and Williams, 1988; Boshier, 1977; Morstain and Smart, 1974).

Semantic-Differential Technique

The semantic-differential technique is a combination of scaling and associational procedures. Subjects are provided a concept (e.g. University of Calgary) and a series of bipolar adjectival scales (e.g. good vs. bad; pretty vs. ugly) with which to differentiate it. The subjects' task is to indicate the direction of the item's association and its intensity on a seven-step scale (Osgood, 1952; Osgood, Suci and Tannenbaum, 1957).

The basis of this approach is linguistic: metaphor in language often uses two or more dimensions of experience (defined by pairs of polar adjectives e.g. hope—despair and

white— black) as if they were parallel with translations occurring between equivalent portions of the continua (Osgood, 1952). The process of description can be conceived of as allocating direction (quality) and distance (intensity) along a straight-line function that passes through an origin point at the mid-point of the scale (Osgood et al., 1957). A limited number of such continua can be used to define a semantic space within which to measure and compare the meaning of one or more concepts. The operational definitions of meaning is the outcome of the procedures.

Messick (1957) identifies three assumptions underlying assigning metric properties to semantic-differential scales:

1. Assigning integers assumes equal intervals within the scale.
2. When distance measures are taken over several scales, equal intervals between scales are assumed.
3. Factor analysis assumes commonality of the zero (or origin) point across scales.

Messick tested these assumptions using the method of successive intervals to create a subjective metric, thus allowing an estimation of interval length and permitting an evaluation of the equality of intervals along a scale. His results (also cited in Osgood et al., 1957) show intervals across nine commonly used scales to be highly correlated with the assumed range mid-points (ranging from .984 to .998) and that the consistent placement of boundaries argues against random fluctuation. Messick's work suggests that semantic differential results do meet parametric assumptions, yielding interval (rather than ordinal) data.

This has not received wide acceptance (Babbie, 1992; Bieger and Gerlach, 1996) because, despite the evidence suggesting that the technique results in interval data, the methodology does not guarantee it.

DATA GATHERING PROCEDURES

Data collection was completed in October 1996. Respondents received a letter explaining their selection and the purpose. Four days later, the instrument was mailed to respondents followed seven days later by a reminder. Questionnaires were accepted if returned within 25 days. The response rate was 26% (n=78).

CONTROL VARIABLES

Jackson (1978) lists important predispositional variables that must be controlled for. *Geographic location* and *grade level* were controlled for: all respondents will be first-year university students having graduated from Calgary high schools the previous June.

Socioeconomic status is assessed through measurement of parental education. Guppy and Pendakur (1989) suggest that educational attainment has several advantages over other socio-economic measures, including higher response rates and measurement of both parents. Further, they found parental education to be highly correlated between parents (r=.54 in 1975 and r=.58 in 1984). This allows a summation and averaging that can be conveniently divided into categories less arbitrary than income or employment. Wanner's (1995) work allows broad generalizations about earnings and education if necessary.

The influence of *friends, family type, educational aspirations* and *sex* were controlled for in as were *high-school grades, entry faculty* and *anticipated undergraduate degree.*

ANALYSIS OF DATA

After optical scoring and entry into SPSS 6.1, data were screened for accuracy and plausible means and standard deviations. Missing data were checked and non-biographical values were replaced by means from the sample. Summaries from the sample were compared to the population based upon sex, entry faculty and grade-point average. Variables with abnormal distribution were identified and transformed.

Principal components analysis was performed on variables measuring motives for attending a university to determine what underlying factor structure existed. The number of relevant factors underlying the variables was to be determined by selecting factors with Eigenvalues larger than 1.0 (Norusis, 1994) . Because of the small size of the sample, this yielded 8 factors and, instead, a scree plot was used to ascertain that solutions containing four, five and six factors would be worthwhile generating.

Varimax and oblimin rotation were separately employed to simplify structure (enhancing interpretation) and factor loadings determined. The four-factor solution proved difficult to interpret and of limited utility and was immediately discarded. Interpretation of the five- and six-factor solutions was carried out with little difference

in results. Because the six-factor solution increased complexity and failed to enhance understanding, it was also discarded. The five-factor, oblimin rotation was retained for further interpretation. Loadings with absolute values less than .4 were eliminated.

Cluster analyses were performed to determine the benefit segmentation most appropriate for this sample based on variables measuring reasons for attending a post-secondary institution. The transformed scores for variables measuring motivation for attendance were used. The data were standardized (range 0 to 1) and squared Euclidean distance was selected. SPSS's hierarchical cluster analysis procedure grouped data by case; because of the small size of the sample, getting a good dispersion of cases into different variables was difficult. Centroid, median, and nearest neighbor clustering proved inadequate while furthest neighbor and Ward's method yielded better distributions. There was little different between the latter two methods and Ward's method was based on a review of the dendrogram. The number of clusters appeared to stabilize at five with further division hampering interpretation, providing little increase in understanding and leaving too few cases in each cluster.

Data were then split and separate frequencies run for each cluster. Interpretation of each cluster in relation to the sample and the other clusters based on background variables, motives for participation and institutional characteristics provided cluster descriptions.

Cluster analysis with such a small sample (n=77) provides unique challenges for interpretations. Near-unanimous agreement on motives were necessary before traits were ascribed to a cluster. Seven-point data was collapsed to three-point data (with two being neutral) to look for agreement. Those variables with 70 per cent or greater agreement on one side of neutral were then re-expanded to determine the intensity of the response. Generally, in re-expanded form, ≥ 50 per cent of total responses had to lie in the two most extreme response categories to be considered indicative of a trend.

Institutional characteristics (with multiple indicators for each characteristic) provided significantly more complexity but a similar process was used. Characteristics that had hits of 70 per cent or greater on all three indicators (importance, ideal and actual) were retained for further analysis because of the increased importance of homogeneity in creating an interpretable response.

CHAPTER FOUR—RESULTS

THE SAMPLE

The sample comprises 78 returned questionnaires out of an initial mailing of 300; the response rate was 26%. Although low by the standards of educational research, a survey of 182 commercial marketing surveys noted a consistent response rate of 30% (Tull and Hawkins, 1987). They also report mail-based surveys as having a 23% return rate at four weeks.

When compared to the population, the respondents were more often female (see Table 4.1) but there was little difference when compared using entry faculty (see Table 4.2) or grade-point average (see Table 4.3).

Table 4.1

Sample Compared to Population Based on Sex

Sex	Sample%	Population %
Male	31	47.3
Female	69	52.7

Population data based on N.J. Prentice (personal communication, November 28, 1996)

Table 4.2

Sample Compared to Population Based on Entry Faculty

Faculty	Sample %	Population%
General Studies	85	79.47
Engineering	5	12.16
Fine Arts	3	3.31
Kinesiology	4	3.04
Nursing	3	2.02

Population data based upon Krivy (1996)

Table 4.3

Sample Compared to Population Based on Entry GPA (when available)

GPA%	Sample %	Population%
65–69	15	14
70–74	31	23
75–79	22	24
80–84	18	20
85–89	10	13
90–100	3	5

Notes: 1 Population data based upon Krivy (1996).
2 Cumulative percentage varies due to rounding.
3 Four cases were excluded due to non-response.

DATA SCREENING

Missing data were checked and non-biographical values were replaced with means from the sample. Motivation questionnaires (those measuring reasons for attending university) were screened for non-normal distribution and 21 of 26 variables were transformed using SPSS's compute function. Variables were then re-examined and 8 re-transformed.

The variables representing motive are seven-point variable (noting the influence the variable played in the decision to attend where 1=very small and 7=very large). The variables representing the importance of institutional characteristics are also seven point where 1=very weak and 7=very strong. The variables representing ideal and perceived levels of an institutional characteristic (e.g. appearance) are seven point bi-polar (e.g. 1=beautiful and 7=ugly). A copy of the instrument is located in Appendix One.

FACTOR ANALYSIS

Principal components analysis was performed on variables measuring motives for attending a university. The number of relevant factors underlying the variables was to be determined by selecting factors with Eigenvalues larger than 1.0 (Table 4.4) (Norusis, 1994) .

Because of the small size of the sample which yielded 8 factors, a scree plot (see Figure 4.1) was used instead to ascertain solutions containing four, five and six factors.

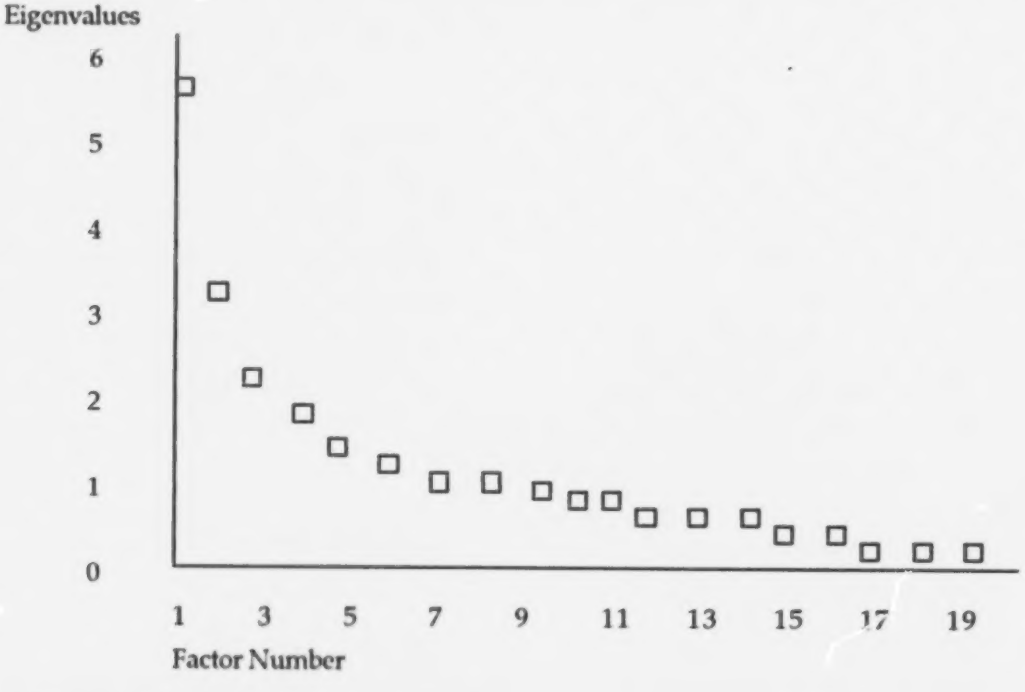
Table 4.4

Principal Components Analysis Initial Statistics on Motivation for Attending University Truncated at Eigenvalues ≥ 1.0

Variable	Eigenvalue	%Variance	Cumulative %Variance
Factor 1	5.57729	21.5	21.5
Factor 2	3.1585	12.4	33.8
Factor 3	2.21585	8.5	42.3
Factor 4	1.68300	6.5	48.8
Factor 5	1.40092	5.4	54.2
Factor 6	1.30395	5.0	59.2
Factor 7	1.06941	4.1	63.3
Factor 8	1.05626	4.1	67.4

Note: Cumulative percentage varies due to rounding.

Figure 4.1 Scree Plot of Factor Analysis



Note: Figure 4.1 truncated at 19 (of 26) factors.

Varimax and oblimin rotation were separately employed to simplify the structure of the solution (enhancing interpretation) and factor loadings determined. The four-factor solution proved difficult to interpret and of limited utility thus was discarded. Interpretation of the five- and six-factor solutions was carried out with little difference in results. Because the six-factor solution both increased complexity and failed to enhance understanding, it was also discarded. The five-factor oblimin solution was eventually retained.

The first motivational factor (Connection) can be represented as seeking connection and rejecting isolation. The factor loadings are outlined in Table 4.5.

Table 4.5

Factor Loadings for Factor 1 (Connection) in Five-Factor Oblimin Solution

Variable	Loading
Participate in social activities	.8293
Meet new people	.6905
Participate in sports	.5325
Become part of a new community	.6192
Expand social circle	.7891
Participate in recreational activities	- .7892
Have fun	- .7326

Those who are highly motivated on this factor appear to focus on becoming connected with others through interaction. The commuter nature of The University of Calgary (particularly given the sample is composed of native Calgarians) may significantly impact responses on this variable. Respondents may look to the broader community and their existing social circle for fun and recreation (especially given the many recreational opportunities in the nearby mountains) but to the campus as a place to expand their social circle and interact with peers. This and subsequent factors receive more complete treatment in Chapter Five.

The second motivational factor (Self-Awareness) can be represented as seeking self-awareness in contrast to maintaining self-assurance. The factor loadings are outlined in Table 4.6.

Table 4.6

Factor Loadings for Factor 2 (Self-Awareness) in Five-Factor Oblimin Solution

Variable	Loading
Develop greater personal insight	.5872
Wanting more time to plan career	.4553
Improve problem-solving skills	.6547
Develop creativity	.7125
Learn about new things	.6531
Improve self-confidence	.6738
Improve interpersonal skills	- .4667
Improve ability to express oneself	- .6560
Increase understanding	- .7176

Those who are highly motivated on this factor appear to focus on self-awareness. The concentration appears to be internal (altering the self) as opposed to external (altering the world) and the benefit sought from university is growth and self-knowledge.

The third motivational factor (Advancement) can be represented as seeking (or maintaining) personal advancement at the expense of a developmental focus. The factor loadings are outlined in Table 4.7.

Table 4.7

Factor Loadings for Factor 3 (Advancement) in Five-Factor Oblimin Solution

Variable	Loading
Obtain a degree	.4810
Achieve a higher standard of living	.6911
Become self-sufficient	.6258
Develop personal insight	- .4335
Be seen as educated	- .7113
Open up more career opportunities	- .4748
University education required for a job	- .5124

Those who are highly motivated on this factor appear to focus on material and/or employment advancement. This is contrasted with a developmental perspective where depth and exploration is emphasized over achievement.

The fourth motivational factor (Learning) can be represented as seeking knowledge and exploration as opposed to seeking a specific, employment-related goal. The factor loadings are outlined in Table 4.8.

Table 4.8

Factor Loadings for Factor 2 (Learning) in Five-Factor Oblimin Solution

Variable	Loading
Study favorite subject	.5167
Learn about new things	.5144
Family pressure	.6076
Obtain degree	- .5722
More time to plan career	- .5058

Those who are highly motivated on this factor appear to focus on knowledge, either about a favoured subject or new things or both..

The fifth motivational factor (Relationships) can be represented as maintaining relationships and relationship skills. The factor loadings are outlined in Table 4.9.

Table 4.9

Factor Loadings for Factor 5 (Relationships) in Five-Factor Oblimin Solution

Variable	Loading
Improve interpersonal skills	.5047
Pressure from friends	.7321
Participate in sports	- .5067

Those who are highly motivated on this factor appear to be maintaining their relationships. This factor is poorly defined but too confused interpretation of the four factor solution to integrated into a simpler model.

CLUSTER ANALYSES

Cluster analyses were performed based on variables measuring reasons for attending a post-secondary institution using the transformed and standardized scores for variables measuring motivation for attendance. The initial results of the cluster analysis (four clusters) were disappointing primarily because of the overwhelming impact personal advancement motives appear to have on every cluster thus drowning out the subtler differences. A more complete discussion of the clusters appears in Chapter Five and provides substantially more explanation of their meaning.

The first cluster makes up 21.1 per cent of the sample (n=17) and appears to be seeking two main benefits sought from attendance (1) financial security and (2) social contact. The motives driving this cluster are outlined in Table 4.10.

Table 4.10

Motives of Cluster 1 (n=17)

Variable	%Total	%5	%6	%7
Achieve a higher standard of living	100	6	41	53
Expand career opportunities	94	6	41	47
Meet new people	94	41	47	6
Family Pressure	89	12	6	71
University education required for career	88	29	12	47
Expand social circle	87	41	18	29
Have fun	82	24	35	24

Variables noted were rated as having a large influence on the decision to attend university (marked as a 5, 6 or 7 on a seven-point scale). Cumulative percentages may vary due to rounding. For example, the first factor above would appear as (100% 6–41–53) in the text.

The institutional characteristics of most importance to the clusters' purchase decisions are the quality of education (89% 24–29–35%) and the reputation (72% 24–24–24%) of the institution. The perceived quality of education was good (65% thought it superior but only barely 47–18–0%) as was the perceived reputation (76% thought the U of C reputable, but only barely 47–29–0%). Also of note were the respondents' limited educational plans past the bachelor's degree.

The second cluster makes up 23.4 per cent of the sample (n=18) and appears to be seeking employment and financial security from attending university. The motives driving this cluster are outlined in Table 4.11. Also noted are the weak social motives that showed up. These were the only motives that registered as notably negative.

Table 4.11

Motives of Cluster 2 (n=18)

Variable	%Total	%5	%6	%7
Achieve a higher standard of living	94	11	33	50
University education required for career	94	0	22	72
Expand career opportunities	90	6	28	55
Obtain a degree	89	28	44	17
Variable	**%Total**	**%3**	**%2**	**%1**
Pressure from friends	100	6	17	78
Participating in sports	89	8	11	70
Participating in recreational activities	78	6	17	56
Participating in social activities	72	11	11	50

Cumulative percentages may vary due to rounding.

All measures of institutional characteristics (importance, ideal and perceived) were equally distributed (i.e. nothing stood out as an important or desirable or favorably perceived characteristics) and may indicate the overriding motive of employment and financial security making these irrelevant. This would also explain the lack of desire to interact with other students in any campus-based activities.

The third cluster makes up 27.3 per cent of the sample (n=21) and appears to be seeking three main benefits sought from attendance: financial security, social contact and academic stimulation. The motives driving this cluster are outlined in Table 4.12.

The institutional characteristics of most importance to the clusters' purchase decisions are the quality of education (90% 20–35–35%), the friendliness of the campus (67% 33-29-5%) and the academic flexibility (72% 24–38–10%) of the institution. The perceived quality of education was good (65% thought it superior but only barely 35–25–5%) as was the perceived friendliness (90% thought the U of C friendly 5–43–43%) and the academic flexibility (72% found the U of C flexibly 5–38–29%).

Table 4.12

Motives of Cluster 3 (n=21)

Variable	%Total	%5	%6	%7
Obtain a degree	100	14	43	43
Learn about new things	100	33	38	29
Increase understanding	95	24	43	29
Achieve a higher standard of living	95	5	76	14
Expand career opportunities	95	0	43	52
Study favorite subject	90	29	14	48
Have fun	90	5	48	33
Meet new people	86	5	67	14
University education required for career	86	14	19	52
Become self-sufficient	81	14	48	19
Expand social circle	71	24	38	10

Cumulative percentages may vary due to rounding.

The fourth cluster also makes up 27.3 per cent of the sample (n=21) and is seeking two main benefits sought from attendance: employment and financial security and academic stimulation. This differs from cluster 3 with of the inclusion of family pressure and the desire to be seen as educated. The motives of this cluster are outlined in Table 4.13.

Table 4.13

Motives of Cluster 4 (n=21)

Variable	%Total	%5	%6	%7
Obtain a degree	100	5	14	81
University education required for career	100	0	14	86
Learn about new things	100	14	43	43
Become self-sufficient	100	0	14	86
Increase career opportunities	100	10	0	90
Achieve a higher standard of living	96	0	10	86
Increase understanding	95	24	33	38
Seen as educated	90	19	38	33
Develop personal insight	90	14	33	43
Have fun	86	5	43	38
Improve self-confidence	81	10	33	33
Family pressure	76	19	19	38

Cumulative percentages may vary due to rounding.

The institutional characteristics of most importance to the clusters' purchase decisions are the quality of education (95% 5–24–67%), the reputation of the university (90% 24–29–38%), the friendliness of the campus (86% 24-43-19%), the academic flexibility (81% 33–24–43%), and the cost (76% 10–19–48%) of the institution. The perceived quality of education was good (71% thought it superior 14–33–24%) however the perceived reputation of the university was not (52% thought it was reputable but only barely 29–14–10%). The perceived friendliness was high (90% thought the U of C friendly 29–43–19%) as was the academic flexibility (71% found the U of C flexible 33–19–19%). The cost (62% rated an ideal cost as cheap 33–0–29%) was rated as expensive (62% thought it was expensive 24–14–24%).

Also of note is the high percentage of respondents planning on pursuing graduate studies and the low percentage planning on pursuing professional studies of this cluster when compared to the rest of the sample, as outlined in Table 4.14 below.

Table 4.14

Planned Educational Attainment of Cluster 4 Compared With Total Sample

Planned level of education	%Cluster 4	%Total Sample
College diploma or certificate	24	22
Technical-school diploma or certificate	10	5
Bachelor's degree	100	97
Professional degree	5	18
Master's degree	67	35
Doctoral degree	14	6

When the entire sample is examined for the largest motivating factors, two distinct patterns emerge: (1) respondents overwhelming cite reasons centering on financial and employment security as reasons why they chose to attend university; and (2) respondents cite intellectual and social benefits as reasons for choosing to attend university. These two findings are consistent with the social circumstances affecting current and future frosh classes and are discussed further in Chapter Five.

Table 4.15

Motives of Sample With ≥70% Agreement (n=77)

Variable	%Total	%5	%6	%7
Increase career opportunities	95	5	27	63
Obtain a degree	94	22	31	41
Achieve a higher standard of living	94	9	40	51
University education required for career	92	10	17	65
Become self-sufficient	85	22	29	33
Increase understanding	85	22	40	23
Learn new things	82	31	31	21
Meet new people	77	24	40	13
Study favorite subject	76	21	27	28
Have fun	73	13	34	26

Cumulative percentages may vary due to rounding.

The institutional characteristics respondents most often cite as important are reputation (74%) and quality of education (84%). This is consistent with the pervasive employment-related motives that drive students: they are looking for a good return (employment-wise) on their investment. The University of Calgary is rated as reputable by 66 per cent of those respondents while 58 per cent perceive the quality of University of Calgary's education to be superior (see Table 4.16 below). It should be noted that respondents only have two months experience to base their assessments on.

Table 4.16

Frequency Chart for Perceived Quality of Education at U of C (n=77)

Level of Support	Frequency	%	Cum%
Superior	3	4	4
Moderately superior	13	17	21
Somewhat superior	28	37	58
Neither superior nor inferior	26	34	92
Somewhat inferior	5	7	99
Moderately inferior	1	1	100
Inferior	0	0	100

Percentages may vary due to rounding.

SUMMARY

Data analyses yielded three main results:

1. The sample broadly resembles the population in terms of sex, grade-point average and entry faculty with a slightly higher percentage of female respondents.
2. There are five motivational factors underlying the 26 variables measuring reasons for choosing to attend a university.
3. There are four main clusters of approximately equal size based on variables measuring reasons for choosing to attend a university.

Additionally, it appears that, for both the sample as a whole and for individual clusters, variables measuring desire for financial and employment security are overwhelmingly rated as important reasons for attending university. This finding is supported when institutional characteristics are examined: reputation and quality of education, characteristics related to the value of a degree in the marketplace, consistently are reported as important factors in choosing an institution. This is congruent with the social context of frosh.

To a lesser degree, variables measuring social and academic opportunities are rated important, although not by every cluster. This is important as it allows further examination of each cluster to determine how they differ despite the tsunamic effect of employment-related motives. Each factor and cluster is further expanded upon and the implications for recruiting future frosh are discussed in Chapter Five.

CHAPTER FIVE—DISCUSSION AND CONCLUSIONS

The chapter elaborates upon the findings noted in Chapter Four by placing them in context and exploring the implications they have for recruiting frosh to The University of Calgary.

DISCUSSION OF KEY FINDINGS

The questions posed at the start of this study were four:

1. What typology, based on benefits sought from participation, emerges among first-year University of Calgary students and is this congruent with Church and Gillingham' s analysis of benefit dimensions?

2. What is the optimal clustering (segmenting) of the frosh class based upon the benefit typology developed?

3. How can each benefit segment best be described by biographical information, motives for participation and perceptions of institutional characteristics?

4. Are there important benefit-segment differences/commonalties that can be used to increase the efficiency and effectiveness of the University of Calgary's recruiting practices?

An additional question was developed during data analysis:

5. What generational or cultural differences or expectations exist between frosh and The University of Calgary (both institutionally and in terms of faculty) and how might these impact recruiting strategies?

Satisfactory answers were formulated and each question is answered in turn.

Elaboration of Factors Underlying Motives

The typology of benefits sought for attendance that emerges from the factor analysis is:

1. *Connection*—this factor reflects participation in order to make new friends and expand the respondents' social circle.

2. *Self-Awareness*—these respondents are interested in more fully exploring themselves and perhaps changing their perspective to become more congruent with their experience in the world.
3. *Advancement*—this factor is strongly associated with participation for personal enhancement or professional advancement—a simple solution to the complex employment picture many frosh confront.
4. *Learning*—these respondents are engaged in learning for the sake of learning (pursuing a favoured subject or additional knowledge in general or both) as opposed to pursuing a goal orientation.
5. *Peer Pressure*—these respondents are largely reacting to peer pressure to attend university.

This typology is broadly similar to that outlined by Church and Gillingham (1988) and the results from Boshier's EPS (Merriam and Caffarella, 1991). This typology also broadly agrees with previous Office of Institutional Analysis (1995) research into what motivates University of Calgary students.

The first motivational factor (Connection) can be represented as seeking connection and rejecting isolation. The factor loadings are outlined in Table 4.5. This factor is congruent with Bibby and Posterski's (1992) finding that teenagers place a high value on relationships, particularly with their peers. Given the period of transition traditional-age frosh enter when they start university (e.g. many are now legally adults, many leave behind public-school peer groups, and some leave home (emotionally, if not physically)), seeking connection to a new community through social activities is an understandable reaction.

The negative loadings of having fun and participating in recreational activities may be the result of the commuter nature of The University of Calgary. Most students (and certainly almost the entire sample) do not live on campus and many retain at least part of their previous peer group into the first year of university. Further, Calgary offers significant recreational activities, either in the city or in the nearby Rocky Mountains, thus students may not be relying on their campus experience to provide fun and recreation. This stands in contrast to what the campus experience can provide: structured opportunities (via classes, clubs and cabarets) to interact with a pre-culled

group of peers who may be more desirable than a random sample of people met on the street.
The second motivational factor (Self-Awareness) can be represented by seeking self-awareness and a rejection of self-assurance. The factor loadings are outlined in Table 4.6. Those who are highly motivated on this factor appears to focus on self-awareness with an internal (altering the self) as opposed to external (altering the world) concentration. The benefits sought from university are growth and self-knowledge.

This factor may represent the process of cognitive development (Perry, 1970) as impacted by the social circumstances into which frosh emerge. The items with positive loadings represent a self-development focus based on changing oneself in reaction to new information (Perry's accommodation). Those motives with negative loadings (improving interpersonal skills and the ability to express oneself) are skills used to assimilate or manage the external world. The negative loading on 'increase understanding' may be another technique used to manage the external world while preserving oneself from change. On the other hand, 'increase understanding' seems to positively correlate with 'develop greater personal insight' and 'learn new things' in the cluster analysis. This may be an anomalous loading based on the small sample size.

The third factor (Advancement) can be represented as seeking personal advancement at the expense of developing breadth. The factor loadings are outlined in Table 4.7. This factor presented significant difficulty in interpretation as it seems to have contradictory loadings. However, it becomes understandable if those who are highly motivated on this factor focus on material and/or employment advancement. This is contrasted with a rejection of depth and flexibility which are seen as oppositional to immediate achievement. A simpler characterization of this split would be a short- and long-term approach.

The economic insecurity noted by Coté and Allahar (1994), Rifkin (1995) and Reid (1996) would create two possible perspectives on higher education in the frosh class: (1) it provides job-specific training (embodied in a credential) that will provide a higher standard of living and self-sufficiency, a view that is congruent with the historical impact of higher education on earnings (Wanner, 1995); and (2) education provides depth and flexibility which also have a positive impact on achievement but requires more work and a longer-term perspective. This duality is congruent with frosh who are

looking for a simple solution (i.e. get a degree equals get a job) in a context which consistently emphasizes the complexity and uncertainty (e.g. everyone knows an unemployed PhD).

It is also conceivable that clusters will contain both motives that loaded positively and negatively on Factor 3 as students attempt to address both their short- and long-term advancement needs.

The social context from which the Busters and Echo Boomers emerge indicated that motives in this factor (both positively and negatively loaded) would be important benefits sought by students. Coté and Allahar (1994) note that economic insecurity is a major theme amongst young Canadians, particularly as the Boomers consolidate their hold on jobs and new job creation is concentrated in part-time, service jobs (Gower, 1990; Rifkin, 1995; Reid, 1996). The overwhelming results in the cluster analyses were surprising, but it seems unreasonable to chalk this up to non-response bias (in fact, one would expect just the opposite—that those with an intellectual orientation would be over-represented) thus this phenomenon appears to have some validity.

The fourth motivational factor (Learning) can be represented as seeking knowledge and exploration while rejecting a specific, employment-related goal. The factor loadings are outlined in Table 4.8. Those who are highly motivated on this factor appear to focus on knowledge, either about a favoured subject or new things or both. This is contrasted by being interested in exploring an employment-related goal. This factor is congruent with the explicit mission of universities (to create and transmit knowledge) and thus would be an expected motive of at least some students.

This factor represents the traditional view of students as well prepared and motivated to seek knowledge for its own sake. It may be that students with high scores on this factor appear extremely focused and thus generate family pressure to capitalize on it by attending university. On the other hand, it may be the family pressure that forces respondents to focus their interests earlier than their peers. Or it may be that the family or cultural norms of the respondents emphasize learning as an end in itself, although if this is the case then 'being seen as educated' should have loaded on this factor as might have 'increasing understanding' and 'developing personal insight'. Finally, it may be that

respondents misinterpret family support as pressure. It is not possible to determine and causal relationship in this research.

Given the fiscal pressures on frosh, these motives were expected to load infrequently on the cluster analysis and showed up in only the third and fourth clusters. This factor may be impacted by Pitz and Harren's (1990) caveat about determinant variables like fiscal motives simply overriding other important (but non-determinant) motives.

The fifth motivational factor (Relationships) appears focus to maintaining relationships. The factor loadings are outlined in Table 4.9. This factor is poorly developed and little emphasis should be placed on it. It was retained because integrating these loadings into a four-factor solution proved too difficult to interpret.

Bibby and Posterski's (1992) findings about the value of friendship to teenagers, particularly because of the decline in influence of the family, make peer pressure an understandable reason to attend university although its impact may be negligible. The pressure factor of other researchers tend to be a disparate category where several pressures are lumped together including family and employer -related pressure. It seems reasonable to assume that frosh would not have employee-related pressure. Family pressure loaded on factor four. That teacher pressure did not load anywhere and needs further research.

Elaboration of Clusters as Market Segments

A key purpose of this study was to segment the frosh market to suggest ways in which recruiting could be made more effective and efficient by addressing common and powerful benefit expectations. The optimal clustering in terms of interpretability and utility based on benefits sought from attending university creates four segments, each roughly equal in size, and descriptively called:

1. Is the Campus Pub Near the Employment Centre?
2. Take My Wife, Please
3. The Full Meal Deal
4. My Kids are Going to Queen's

As noted above, the desire for financial and employment security has proven to be an overriding factor and makes it more difficult to tease out the differences in each segment. The most profitable way to determine the individual characteristics of each cluster is to (momentarily) ignore the fiscal imperative and look to secondary motives and how these might be used to more effectively market The University of Calgary in conjunction with the fiscal motivation.

The first cluster (Is the Campus Pub Near the Employment Centre?) makes up 21.1 per cent of the sample (n=17) and members appear to be seeking two main benefits sought from attendance (1) employment and financial security and (2) social contact. This may be in response to family pressure. Motives are grouped and outlined in Table 5.6.

Table 5.1

Motives of Cluster 1 (Is the Campus Pub Near the Employment Centre?) Adjusted

Variable	%Total	%5	%6	%7
Achieve a higher standard of living	100	6	41	53
Expand career opportunities	94	6	41	47
University education required for career	88	29	12	47
Meet new people	94	41	47	6
Expand social circle	87	41	18	29
Have fun	82	24	35	24
Family Pressure	89	12	6	71

Cumulative percentages may vary due to rounding.

This segment's motives reflect the complexity of achieving financial and employment stability with respondents attempting to get ahead both in traditional ways (i.e. get a degree equals get a job) and in non-traditional ways (i.e. develop a varied skill set that can be employed in many different settings). The degree of importance attached to achieving a higher standard of living and expanding career opportunities indicates an awareness of the increasing stratification and non-traditional opportunities in the job market. In this context, family pressure makes sense as parents desire their children to attain the same or a higher standard of living as they have. Of lesser importance are the social opportunities attending a university provides, particularly given the selection and self-selection mechanisms that restrict entrance into The University of Calgary. This creates a large pool of potential peers that are more desirable than the random sampling

frosh might encounter on the street. This includes a predilection towards higher academic ability, similar levels of maturity, middle-class values and common interests.

The limited educational plans past the undergraduate level of this group reinforce the indications of the factor loading that fiscal security (as opposed to intellectual development) is a key benefit sought. Coté and Allahar (1994) note that the education–employment connection still retains cultural sanction and Wanner's (1995) work outlines that, for the role models of this group, that connection is borne out. It may also be that graduate or professional studies are not an option because of the opportunity cost.

Related to this fiscal pre-occupation (a trait of each segment), the institutional characteristics most important to the clusters' purchase decisions are the quality of education (89% 24–29–35%) and the reputation (72% 24–24–24%) of the institution. This likely represents the cost-benefit analysis of attending The University of Calgary (i.e. is my education marketable?) and is another commonality in all segments.

The second cluster (Take My Wife, Please) makes up 23.4 per cent of the sample (n=18) and members are seeking solely financial security from attending university. The motives driving this cluster are grouped and outlined in Table 5.2. Also noted (in the lower part of the table) are the weak social motives that showed up. These were the only motives that registered for any cluster as notably weak.

Table 5.2

Motives of Cluster 2 (Take My Wife, Please) Adjusted

Variables with high importance	%Total	%5	%6	%7
Achieve a higher standard of living	94	11	33	50
University education required for career	94	0	22	72
Expand career opportunities	90	6	28	55
Obtain a degree	89	28	44	17
Variables with low importance	**%Total**	**%3**	**%2**	**%1**
Fressure from friends	100	6	17	78
Participate in sports	89	8	11	70
Participate in recreational activities	78	6	17	56
Participate in social activities	72	11	11	50

Cumulative percentages may vary due to rounding.

This segment appears to be solely driven by the financial and employment benefits of university and fit the stereotype of the commuter student (i.e. go to class and go home). This is supported by all measures of institutional characteristics (importance, ideal and perceived) being equally distributed (i.e. nothing stood out as an important or desirable or favorably received characteristic). This focus also explains the lack of desire to interact with other students in any campus-based activities (which remains as the only distinguishing characteristic of the group once the fiscal motives are eliminated).

The third cluster (The Full Meal Deal) makes up 27.3 per cent of the sample (n=21) and appears to be seeking three main benefits sought from attendance (1) financial security; (2) social contact; and (3) intellectual stimulation. The motives driving this cluster are grouped and outlined in Table 5.3.

Table 5.3

Motives of Cluster 3 (The Full Meal Deal) Adjusted

Variable	%Total	%5	%6	%7
Obtain a degree	100	14	43	43
Achieve a higher standard of living	95	5	76	14
Expand career opportunities	95	0	43	52
University education required for career	86	14	19	52
Become self-sufficient	81	14	48	19
Learn about new things	100	33	38	29
Increase understanding	95	24	43	29
Study favorite subject	90	29	14	48
Have fun	90	5	48	33
Meet new people	86	5	67	14
Expand social circle	71	24	38	10

Cumulative percentages may vary due to rounding.

Again, the pre-eminence of financial motives rises to the fore. However, this segment also highly loads on other motives that appear to round out the benefit profile. This segment most resembles the ideal, well-motivated student who is seeking multiple benefits from attending university focusing on self-development, connection and advancement.

The institutional characteristics rated as most important to this clusters' purchase decisions reflect the multiple goals. They include the quality of education (90% 20–35–35%), the friendliness of the campus (67% 33-29-5%) and the academic flexibility (72% 24–38–10%) of the institution.

The fourth cluster (My Kids are Going to Queen's) also makes up 27.3 per cent of the sample (n=21) and appears to be seeking two main benefits sought from attendance, financial security and intellectual stimulation, in an effort to improve social standing. The motives driving this cluster are grouped and outlined in Table 5.4.

Table 5.4

Motives of Cluster 4 (My Kids are Going to Queen's) Adjusted

Variable	%Total	%5	%6	%7
Obtain a degree	100	5	14	81
University education required for career	100	0	14	86
Become self-sufficient	100	0	14	86
Increase career opportunities	100	10	0	90
Achieve a higher standard of living	96	0	10	86
Learn about new things	100	14	43	43
Increase understanding	95	24	33	38
Develop personal insight	90	14	33	43
Have fun	86	5	43	38
Seen as educated	90	19	38	33
Improve self-confidence	81	10	33	33
Family pressure	76	19	19	38

Cumulative percentages may vary due to rounding.

The high percentage of respondents planning on pursuing graduate education (and the low percentage seeking a professional education, see Table 4.14 above) and the importance of fiscal motives combined with the loading of family pressure, being seen as educated and desiring to improve one's self-confidence suggests that social mobility may be the goal of this group. This group predominantly (2:1) comes from schools in parts of the city with lower socio-economic status and is the only one to note the importance of cost (76% 10–19–48%) in combination with rating The University of Calgary as expensive (62% 24–14–24%). Further, the quality of education (95% 5–24–67%) and the reputation of the university (90% 24–29–38%) were also rated as important.

This clustering arrangement was considered optimal for four reasons. First, it presents a believable benefit segmentation based on motives driving Echo Boomers to participate in higher education. Second, it is a reasonably simple segmentation with a well defined motivational profile compensating somewhat for a small sample size. Third, it broadly agrees with the general literature on participation in adult and higher education (Church and Gillingham, 1988; Stage and Williams, 1988; Boshier, 1977; Morstain and Smart, 1974) and the limited research specific to The University of Calgary (OIA, 1995). Fourth, it provides common and discrete motives that can be utilized as outlined below.

Commonalties/Differences Within Clusters

Increasing both the effectiveness and efficiency of the recruiting strategies is premised on finding commonalties in the various segments; otherwise, trade-offs are necessary: hitting a hot-button of one group may have no effect on another thus necessitating an additional and different approach to interest the second segment. As outlined in Table 5.5, when the entire sample is examined for the largest motivating factors, two distinct

Table 5.5

Motives of Sample With ≥70% Agreement (n=77)

Variable	%Total	%5	%6	%7
Increase career opportunities	95	5	27	63
Obtain a degree	94	22	31	41
Achieve a higher standard of living	94	9	40	51
University education required for career	92	10	17	65
Become self-sufficient	85	22	29	33
Increase understanding	85	22	40	23
Learn new things	82	31	31	21
Meet new people	77	24	40	13
Study favorite subject	76	21	27	28
Have fun	73	13	34	26

Cumulative percentages may vary due to rounding.

patterns emerge: (1) respondents overwhelming cite reasons centering on financial and employment security as reasons why they chose to attend university; and (2) nearly 80 per cent of respondents cite social and intellectual benefits as reasons for choosing to attend university.

In terms of being important to particular clusters, the following motives register as noted

1. Achieving a higher standard of living (four clusters)
2. Expanding career opportunities (four clusters)
3. University education required for career (four clusters)
4. Obtain degree (three clusters)
5. Have fun (three clusters)
6. Becoming self-sufficient (two clusters)
7. Learning new things (two clusters)
8. Increasing understanding (two clusters)
9. Meeting new people (two clusters).

These findings (particularly the fiscal and social ones) are consistent with the social circumstances affecting current and future frosh classes as discussed in Chapter Two. In addition to bringing their non-academic problems to campus, students are bringing their non-academic needs with them. This may create cultural conflict as students' desires and expectations differ from the values of faculty and the mandate, offerings and expectations of The University of Calgary.

The institutional characteristics respondents most often cite as important are reputation (74%) and quality of education (84%). These are consistent with the pervasive employment-related motives that drive students: they are looking for a good return (employment-wise) on their investment.

IMPLICATIONS OF KEY FINDINGS

The major implication of this study is that it is possible to increase the efficiency and effectiveness of recruiting strategies by focusing on promoting the specific benefits sought from attendance. However, this approach may impact only those students (or types of students) who already attend The University of Calgary because the sample does not take into account those students who have decided to attend other post-secondary institutions or pursue non-educational options after high-school. Despite this, maintaining enrollments is an important component of enrollment management in an increasingly competitive marketplace.

A second implication is that there is a cultural disjunction between the institution and students. This study documents (albeit weakly) the effects of the fundamental shift in values that has taken place in Canada on college-choice behavior. The pre-occupation of frosh with self-advancement and their savvy as consumers is indicative of the contraction of generosity noted in Reid (1996). This stands in contrast with the collegial culture documented in Berquist (1992) and the values that predominated during the emergence of the Boomers' and the Silent Generation.

The Way to Their Hearts Isn't Through Their Stomachs

The overwhelming importance of achieving and maintaining employment and fiscal security to frosh appears to be a key component of understanding and influencing their purchase behavior. However, interpreting this to mean that the university should simply sell an education as a way to get a job (e.g. "university graduates earn half a million dollars more than those who don't") is simplistic and undesirable for several reasons:

- it fails to consider the other benefits that frosh in segments 1, 3 and 4 are seeking and the interactional effects of each benefit profile;
- it is incongruent with many of the generation- and/or class-based norms that parents of Echo Boomers (a significant source of influence in the PSDM process) may hold about the outcomes of a university education;
- it may not be a field in which the university excels when compared to other forms of post-secondary education (e.g. technical institutes);
- it validates the simplistic approach to measuring educational outcomes embodied in Key Performance Indicators;
- it violates the collegial norms of the university and will alienate faculty and, to a lesser extent, staff; and
- it contributes to the idea that unbridled self-interest is the cultural ideal.

However, the commonality of motive does signal that featuring facets of a university education that helps students achieve and maintain employment and fiscal security would make it an effective recruiting strategy. This could include references to key competencies in an informationalizing economy and how a university education can help students obtain them as well as specific programs that combat the perception of a university degree as primarily theoretical. Recognizing and attending to this need in

perspective students will also allow other motives to emerge as determinant factors in institutional choice.

An important question to answer is: "Why bother recruiting when Calgary has a virtual monopoly on the Calgary market." This is a difficult question as many students haven't the financial resources to seriously consider other institutions. A number of changes are taking place in the recruiting to make this matter more pressing.

Increasing competition for those students who do have options (either through personal wealth or scholarship offers) is the most immediate threat to enrollment at the university. Market erosion of high-ability students can result in lower quality graduates and the perception that The University of Calgary is a school of last resort. This will contribute to further loss of high-ability students and will also make the cost of out-of-market schools appear relatively lower if prospective students and their families perceive the quality of education at The University of Calgary as low. The focus on self-advancement (perhaps self-preservation is a better term) will exacerbate this trend as students and their parents become willing to make increasing short-term sacrifices to ensure long-term gain. Loans look attractive if the long-term effect is enhanced employment prospects.

The Generation Gap

There appears to be a significant difference between the desires of frosh and the values of the University of Calgary's staff and faculty. This gap can best be understood in context of the cultural framework outlined by Bergquist (1992, adapted). He notes that campuses and personnel subscribe to one of four schools of thought:

1. The collegial culture—where meaning is found in scholarship and faculty governance and where the primary mission is the generation and dissemination of knowledge and the development of specific values and qualities of character in students who will become leaders.
2. The managerial culture—where meaning is found in organization, implementation and evaluation of work and where the primary mission is the inculcation of specific knowledge, skills and attitudes in students who will become citizens.

3. The developmental culture—where meaning is found in fostering personal growth through service and self-exploration and the primary mission is encouraging cognitive, affective and behavioral growth among students, staff and faculty.
4. The negotiating culture—where meaning is found in the establishment of egalitarian policies and structures through bargaining and the primary mission is the establishment of new social attitudes in the face of replicating existing ones.

Frosh, in keeping with the ethos in which they were raised and the world in which they must cope, clearly expect The University of Calgary to primarily reflect the managerial culture where they will develop appropriate employment skills necessary to become responsible and successful citizens. This is in direct conflict with the collegial culture that dominates the university, in part due to the generational gap between faculty and staff and students and in part because of the sub-segment of the Silent and Boomer generations who are drawn to working in higher education.

The collegial culture, dominating academic structures and functioning (and generally in opposition to the managerial culture), emphasizes the pursuit of knowledge for its own sake and the discomfort that faculty express when students are referred to a consumers reflects collegial values. Frustration with the academic culture often generates the developmental culture while frustration with the managerial culture leads to the creation of a negotiating culture. Bergquist's most insightful comment is that conflicting cultures (and their norms and goals) within an institution is often the source of significant angst and difficulty. Being all things to all people leads to resistance and paralysis.

The forces affecting The University of Calgary, brought to a head by the imposition of a managerial culture on the institution by both the provincial government and, perhaps, the expectations of students, has created resistance and confusion as proponents from each culture vie for scarce resources and position within a system approaching a bifurcation point (Capra, 1996)

It is important to resolve this conflict before making decisions affecting recruiting. Recruiting strategies hinge upon the institutional image that is to be cultivated. If an institution decides it will be indisputably recognized for academic excellence, then the recruiting methods need to reflect the desire to attract the best at the expense of serving the needs of lower ability students in the community.

Institutional image should in part reflect the values of the participants. However, this decision also needs to be made within the context of the institution's current image because it is far easier to reinforce an institution's current image than it is to change that image (Trout and Rivkin, 1996). It is far easier to reinforce your view that Rice-a-roni is the San Francisco Treat than The Choice of a New Generation, not only because Rice-a-roni already occupies the San-Francisco-Treat position in your mind but also because Pepsi is currently the product occupying The-Choice-of-a-New-Generation position.

From a marketing perspective, if an existing institutional image contradicts an institutional culture, it is likely easier to change the culture than the perception: faculty can be replaced over a few years while perceptions linger for generations. If current frosh view higher education as a way to maintain their economic position, it is likely that The University of Calgary holds this position (e.g. a job training centre) in the community as those who wanted a focused and exclusively academic education would self-select to another institution. It may then be easier to reinforce this perception than attempt to change it: there is no shame in being the Canadian equivalent of a state school whose primary motive is to provide education to the local population, the traditional role of a regional university.

SAMPLING LIMITATIONS

As noted in Chapter Four, the response rate of 26% (n=78) is generally unacceptable in educational research and introduces the specter of significant non-response error. However, Tull and Hawkins (1987) cite analyses of 182 commercial telephone surveys involving over one million respondents where the median response rate was 30 per cent. They go on to note that mail-based surveys have a response-rate of around 23 per cent at four weeks.

Low response rates do not necessarily preclude valid results. Representativeness of the sample can be imputed based on similarities between the sample and the population based upon relevant characteristics (see Tables 4.1–3).

The population parameters limit the generalizability of the conclusions. Segmentation will only reflect the motives of those students who have already chosen to attend The University of Calgary: no information about prospective students who chose not to

come is available. While the study can refine and economize current recruiting efforts, it provides little guidance if expanding the applicant pool is necessary (e.g. it may be that we currently draw all students from a particular segment already so enhancing marketing to this group will not yield any increase in applicants). If expansion of the applicant pool (or certain segments of the pool) is desired, it is necessary to determine what, if any, differences exist.

Further, the sample, limited by selection criteria, is almost completely composed of traditional-aged frosh. Although the motives of adult students may be similar to those of traditional-aged students, a comparison of the literature suggest they differ somewhat (OIA, 1995; Church and Gillingham, 1988; Stage and Williams, 1988; Boshier, 1977; Morstain and Smart, 1974).

METHODOLOGICAL LIMITATIONS

Perhaps the most obvious methodological limitation is the use of parametric tests on ordinal data. The parametricist school of thought states data dredging may result in false results (see Chapter Three). However, the interval-like nature of semantic-differential data and the reliance of factor and cluster data solely on the interpretability of the results for validity minimizes these concerns. The resulting data is valuable enough to justify using inappropriate statistical tests if, indeed, they are inappropriate at all (see Lorr, 1983).

Of concern in *ex post facto* research is the blurring of memory. Most respondents will have started this process more than one year previous and their reasons for attendance may have changed during (and because of) the post-secondary decision-making process. This may also affect the weightings students give to institutional characteristics (Gilmour et al., 1981). Day (1972) notes that attribute labels have different meanings and importance weights at different stages of the purchase process. For example, tuition level is first a factor in deciding whether a post-secondary institution should even be included in the choice set. Later on, there is the issue of the added value of various other institutional attributes. Finally, buyer regret may positively bias respondents answers as they attempt to cope with dissonance.

Given time and funding constraints, little can be done. Surveying in October represents a necessary compromise: respondents must have adequate experience on campus to

realistically evaluate its attributes; however, this experience will necessarily impact their beliefs about importance. Surveying early in the year will hopefully minimize this.

Day raises several other difficult questions, including the assumption that respondents know why they chose one product over another and that they can quickly reconstruct what may have been an originally ambiguous or irrational decision. However, respondents may still give answers to detailed judgment questions because they are unwilling to admit (to researchers and/or themselves) having acted irrationally. Related to this is that even when consumers know their reasons, there is a strong tendency to give socially acceptable or function-oriented answers to appear highly rational (Engel et al., 1995). These sources of error appears unavoidable but may be minimized by structuring the questionnaire so that there is no obvious place for respondents to present falsely rational answers and providing a broad selection of reasons for attendance.

Finally, ideal-point, multi-attribute preference models are premised on consumers attempting to maximize their utility (i.e. trading off attributes to realize the best combination) and this may ignore the presence of determinant variables. Pitz and Harren (1990) and Chapman (1986) argue that inclusion of an option in the choice set suggests that the option is at least minimally acceptable. However, given the nature of regional universities (i.e. The University of Calgary may be students' only choice) this is not necessarily the case, as was noted by three respondents on their questionnaires. The expansion of post-secondary opportunities in Calgary and changes in how post-secondary is valued weaken the regional-university argument.

IMPLICATIONS FOR FURTHER RESEARCH

It is necessary to validate this motivational typology and segmenting on (1) current students (including non-traditional students), (2) potential students, and (3) over time if it is to be useful in a practical sense. Making recruiting choices based on a small sample isolated in time does not seem prudent. However, the broad agreement between this study and the general and specific literature related to participation does suggest that there is some validity. If this study is valid, it points to a powerful motive (self-advancement) that can be tapped to increase the efficiency and effectiveness of recruiting, assuming it meets the larger image goals of the institution.

If this typology and segmentation can be validated and approved for usage, it is necessary to determine effective ways in which to implement the results. This would likely require a qualitative approach using both potential students and campus stakeholders to determine which themes and images best attract students to an accurate and acceptable representation of the university.

Tangentially, research on the cultural and generation characteristics that appear to separate the consumers and providers of higher education will lead to understanding and possible accommodation of these differences as the university competes for students in the marketplace.

SUMMARY

This thesis explored the motivational typology which underlies first-year University of Calgary students' reasons for attending university. Subsequently, it created a benefit segmentation model based upon motives for participation. Both the typology and the segmentation broadly agree with the literature on participation in adult and higher education.

Of note was the tremendous influence the desire for financial and employment security has over frosh. This is consistent with the social context frosh have grown up in and with the trends that have changed the fundamental norms of Canadian society. This self-interested approach to higher education may conflict with the values of the staff and faculty at The University of Calgary, representing a fundamental stumbling block to utilizing this motive in recruiting students.

Significant choices about institutional mission, image and position need to be made before further recommendations can be made for recruiting strategies. Further, the results of this study should be validated with these frosh, with subsequent frosh classes over time, and with this and other student populations prior to acceptance.

APPENDIX ONE

SURVEY INSTRUMENT

THE UNIVERSITY OF
CALGARY
OFFICE of the ASSOCIATE VICE-PRESIDENT
(STUDENT AFFAIRS)

1996-10-01

Dear first-year student,

Welcome to The University of Calgary!

Within the next week, you (along with 300 other first-year students) will receive a package from me containing a survey. We're interested in why you've chosen to attend the U of C and how you feel about the campus. We think you've made a good choice and your answers to the survey questions will give us a better idea of why. This means we can provide better and more useful information to next year's prospective students.

The information you provide will also form the basis of my Master's thesis.

Your participation is entirely voluntary and if you choose not to participate, simply dispose of the survey. There is no penalty for not participating.

When you receive the questionnaire next week, flip through it and see if it is interesting; it takes about 15 minutes to fill it out. Your responses will remain anonymous throughout the study and returned surveys will be destroyed upon completion of this study.

If you have questions, please feel free to contact me at 438-3191 at any time. Good luck in your first year and I'm looking forward to reading your responses.

Sincerely,

Bob Barnetson
Program Assistant

2500 University Drive N.W. Calgary, Alberta, Canada T2N 1N4
Telephone: (403) 220-0414 Email: rjbarnet@acs.ucalgary.ca

THE UNIVERSITY OF
CALGARY

OFFICE of the ASSOCIATE VICE-PRESIDENT
(STUDENT AFFAIRS)

1996-10-07

Please detach and keep this page for your reference

Dear first-year student,

Why did you choose to attend The University of Calgary? What sort of things made the U of C attractive to you? And how does the U of C compare to your idea of an ideal university?

The University of Calgary is very interested in your answers to these questions. The survey that follows is part of a 300-student research project examining why students choose to attend The University of Calgary and will be used to help guide some of the major changes the university is undergoing. The information you provide will also form the basis of my Master's thesis.

Students who have completed this survey in the past have commented that they enjoyed the chance to think about how they chose a university and bring the process to a close.

If you wish to take part in this study, there are three things you must do.

1. Detach this page and keep it for your records. Contact phone numbers are listed on the reverse if you have questions at any time.

2. Complete the survey that forms the bulk of this booklet and seal it in its return envelope.

3. Place the survey in the mail.

Filling out this survey will take approximately 15 minutes. Your responses will remain anonymous throughout the study and returned surveys will be destroyed upon completion of this study.

Your participation is entirely voluntary and if you choose not to participate, simply dispose of the enclosed material. There is no penalty for not participating.

By returning this questionnaire, you are agreeing to two things:

1. I have been informed of the nature of this research project on the reasons students choose to attend The University of Calgary. I have voluntarily chosen to participate, am aware that my anonymity is guaranteed and that my responses will remain confidential.

2. I understand that completing the questionnaire will require approximately 15 minutes and that once I have completed and mailed the survey, my role in the project is at an end.

If you have questions or wish more information about this study, you may contact the following people:

Bob Barnetson
The University of Calgary
Graduate Division of Educational Research
Phone: 438-3191 (home)
Email: barnetsonb@acifa.gmcc.ab.ca

Thesis supervisor: Dr. Alice Boberg
The University of Calgary
Graduate Division of Educational Research
Phone: 220-5675

Dr. M. Pyryt, Chair
Education Joint Research Ethics Committee
Phone: 220-5626

Karen McDermid
The University of Calgary
Office of the Vice-President Research
Phone: 220-3381

Thank you for your consideration; please complete and return the survey no later than 20 October 1996.

Sincerely,

Bob Barnetson
Program Assistant

THE UNIVERSITY OF CALGARY

GRADUATE DIVISION OF EDUCATIONAL RESEARCH

INTRODUCTION

This study is designed to give The University of Calgary greater insight into why students choose to pursue a university education and what institutional characteristics students place the most value on.

There are three parts to this survey: (1) a section asking you to provide us with some background information about yourself; (2) a section asking you to rate the importance of a variety of reasons for attending university; and (3) a section asking you to complete a number of measures designed to rate The University of Calgary.

It should take you about 15 minutes to complete the questionnaire. If any instructions are unclear, please contact Bob Barnetson at 220-0414 for clarification.

STOP!
Read directions

BACKGROUND INFORMATION

The following questions are intended to provide the study with some background information about yourself. Please answer the questions as completely as possible and remember that your answers are **both anonymous and confidential**.

1. Please indicate **all** levels of education attained by your **mother** by placing a check mark in **each** relevant box.

   - ☐ completed high school diploma or GED
   - ☐ completed college or technical-school diploma or certificate
   - ☐ completed bachelor's degree
   - ☐ completed law, medical or dental school
   - ☐ completed master's or doctoral degree

2. Please indicate **all** levels of education attained by your **father** by placing a check mark in **each** relevant box.

   - ☐ completed high school diploma or GED
   - ☐ completed college or technical-school diploma or certificate
   - ☐ completed bachelor's degree
   - ☐ completed law, medical or dental school
   - ☐ completed master's or doctoral degree

3. Which high-school did you graduate from? _____

4. What was your high-school average when you graduated? _____ %

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BACKGROUND INFORMATION

5. Please think about your close friends in high school. Place a check mark in the **one box** that best describes what **most** of your friends are doing right now.

- ☐ attending a post-secondary institution (college, university, technical school)
- ☐ working full time or looking for full-time work
- ☐ travelling
- ☐ other (please specify): _____

6. Please indicate **all** of the educational credentials you desire to obtain within the next 10 years by placing checkmarks in **each** of the relevant boxes.

- ☐ college diploma or certificate
- ☐ technical-school diploma or certificate
- ☐ bachelor's degree (including second bachelor's degrees)
- ☐ law, medical or dental degree
- ☐ master's degree
- ☐ doctoral degree

7. Are you female ☐ or male ☐ ?

8. Please place a check mark in the box that indicates the faculty you are currently enrolled in.

- ☐ General Studies
- ☐ Engineering
- ☐ Fine Arts
- ☐ Nursing
- ☐ Kinesiology (Physical Education)

9. In what area/field do you anticipate getting your bachelor's degree?

_____

THANK YOU

Please proceed to the next section.

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CHOOSING TO ATTEND A UNIVERSITY

STOP!
Read directions

The following questions focus on why you chose to pursue a university education.

Each question asks you how large of an influence a particular reason for attendance had on your decision to come to university. Please think back to when you were deciding to attend university and answer them based on your feelings then.

After reading each question, please check the box that best represents how large an influence that factor was was on your decision to attend university.

If you feel that the reason exerted an extremely small or extremely large influence on your decision, place your check mark as follows:

extremely small ☑☐☐☐☐☐☐ extremely large

extremely small ☐☐☐☐☐☐☑ extremely large

If you feel that the reason exerted a small or large influence on your decision, place your check mark as follows:

extremely small ☐☑☐☐☐☐☐ extremely large

extremely small ☐☐☐☐☐☑☐ extremely large

If you feel that the reason exerted an moderately small or moderately large influence on your decision, place your check mark as follows:

extremely small ☐☐☑☐☐☐☐ extremely large

extremely small ☐☐☐☐☑☐☐ extremely large

If you feel that the reason exerted neither a small nor a large influence on your decision, place your check mark as follows:

extremely small ☐☐☐☑☐☐☐ extremely large

Please think back to when you were choosing whether or not to attend a university.

The influence of wanting to **improve your interpersonal skills** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of wanting to **achieve a higher standard of living** was

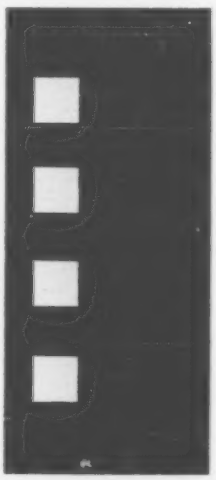
extremely small ☐☐☐☐☐☐☐ extremely large

The influence of **feeling pressure from your friends to go** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of wanting to **improve your ability to express yourself** was

extremely small ☐☐☐☐☐☐☐ extremely large



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CHOOSING TO ATTEND A UNIVERSITY

The influence of wanting to **open up more career opportunities** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of wanting **more time to plan your career** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of wanting to **increase your understanding** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of **feeling pressure from your family to go** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of **knowing a university education was required for a chosen career** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of wanting to **improve your problem-solving skills** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of wanting to **participate in social activities** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of **feeling pressure from your teachers to go** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of wanting to **develop your creativity** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of wanting to **obtain a degree** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of wanting to **continue learning about a favourite subject** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of wanting **others to see you as an educated person** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of wanting to **develop greater personal insight** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of wanting to **participate in recreational activities** was

extremely small ☐☐☐☐☐☐☐ extremely large

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CHOOSING TO ATTEND A UNIVERSITY

The influence of wanting to **learn about new things** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of wanting to **meet new people** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of wanting to **have fun** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of wanting to **become self-sufficient** to go was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of wanting to **improve you self-confidence** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of wanting to **participate in sports** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of wanting to **become part of a new community** was

extremely small ☐☐☐☐☐☐☐ extremely large

The influence of wanting to **expand your social circle** was

extremely small ☐☐☐☐☐☐☐ extremely large

THANK YOU

Please proceed to the next section.

STOP!
Read directions

IMPORTANT INSTITUTIONAL CHARACTERISTICS

The following questions focus on institutional characteristics: which you thought were important, what an ideal university would look like, and how you viewed The University of Calgary

Each set of questions is slightly different. The first set asks you how important various factors were in your decision which university to attend. The second set asks you to rank an ideal university on a series of characteristics. And the third set asks you to rate The University of Calgary on those same criteria.

This study is interested in your thoughts when you were making the decision where to attend.

When you are answering these questions, please think back to when you were deciding which university to attend.

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IMPORTANT INSTITUTIONAL CHARACTERISTICS

When you were deciding which university to attend, how strong of an influence were the campuses'

political leanings	extremely weak	extremely strong	P1
appearance	extremely weak	extremely strong	P2
friendliness	extremely weak	extremely strong	P3
international activities	extremely weak	extremely strong	P4
student involvement	extremely weak	extremely strong	P5
size	extremely weak	extremely strong	P6
modernity	extremely weak	extremely strong	P7
academic flexibility	extremely weak	extremely strong	P8
simplicity of regulations	extremely weak	extremely strong	P9
reputation	extremely weak	extremely strong	P10
quality of education	extremely weak	extremely strong	P11
cost	extremely weak	extremely strong	P12
academic rigor	extremely weak	extremely strong	P13
selectivity	extremely weak	extremely strong	P14

When you were deciding which universiy to attend, how would an ideal campus be rated?

radical	conservative	L1
beautiful	ugly	L2
kind	cruel	L3
local	global	L4
spirited	apathetic	L5
large	small	L6
cutting-edge	antiquated	L7
flexible	rigid	L8
simple	complex	L9
reputable	disreputable	L10
superior	inferior	L11
expensive	cheap	L12
rigorous	easy	L13
elitist	egalitarian	L14

When you were deciding which universiy to attend, how did the U of C rate?

radical	conservative	A1
beautiful	ugly	A2
kind	cruel	A3
local	global	A4
spirited	apathetic	A5
large	small	A6
cutting-edge	antiquated	A7
flexible	rigid	A8
simple	complex	A9
reputable	disreputable	A10
superior	inferior	A11
expensive	cheap	A12
rigorous	easy	A13
elitist	egalitarian	A14

THANK YOU—PLEASE MAIL IMMEDIATELY

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THE UNIVERSITY OF
CALGARY

OFFICE of the ASSOCIATE VICE-PRESIDENT
(STUDENT AFFAIRS)

1996-10-14

Dear first-year student,

I hope your first month at The University of Calgary has gone well and you're enjoying yourself.

Last week, you should have received a survey asking you about why you chose to attend the U of C and how you would rate it. Those of you who have completed and returned the questionnaire, I'd like to thank you for your time; your answers will affect how we portray the university to this year's grade-twelve students and the information we provide them. If you have any questions about this study, please contact me at 438-3191 at your convenience.

If you haven't had a chance to fill out the questionnaire yet, this letter is simply a reminder. We're very interested in what motivated you to attend the U of C and what you think about it now. This is a chance to let the university know what you think and your responses are entirely confidential.

If you've misplaced your questionnaire, please contact me at 438-3191 and I'll arrange for another copy to be sent to you. However, your participation is entirely voluntary and if you choose not to participate, simply dispose of the survey. There is no penalty for not participating.

Good luck in your first year; I'm looking forward to reading your responses.

Sincerely,

Bob Barnetson
Program Assistant

2500 University Drive N.W. Calgary, Alberta, Canada T2N 1N4
Telephone: (403) 220-0414 Email: rjbarnet@acs.ucalgary.ca

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BIBLIOGRAPHY

Adams, O. (1990). "Divorce rates in Canada." in C. McKie & K. Thompson (Eds) Canadian social trends. Toronto, ON: Ministry of Supply and Services Canada and Thompson Educational Publishing, Inc.

Babbie, E. (1990). Survey research methods, 2nd Ed. Belmont, CA: Wadsworth Publishing Company.

Babbie, E. (1992). The practice of social research, 6th Ed. Belmont, CA: Wadsworth Publishing Company.

Bass, F.M. & Wilkie, W.L. (1973). "A comparative analysis of attitudinal predictions of brand preference." *Journal of marketing research.* August. 10. pp. 262–269.

Beckman, D.M., Kurtz, D.L. & Boone, L.E. (1988). Foundations of marketing: 4th Canadian edition. Toronto, ON: Holt, Rinehart & Winston Ltd.

Berquist, W.H. (1992). The four cultures of the academy. San Francisco, CA: Jossey-Bass.

Bibby, R.W. & Posterski, D.C. (1985). The emerging generation: An insider's look at Canada's teenagers. Toronto, ON: Irwin Publishing.

Bibby, R.W. & Posterski, D.C. (1992). Teen trends: A nation in motion. Toronto, ON: Stoddart Publishing Company Ltd.

Bieger, G.R. & Gerlach, G.J. (1996). Educational research: A practical approach. Scarborough, ON: Delmar Publishers.

Boshier, R. (1977)."Motivational orientations revisited: Lifespace motives and the Education Participation Scale." *Adult education.* 27 (2) pp. 89–115.

Bradley, M. & Cleveland-Innes, M. (1991). "Valuing diversity: Responding to the needs of adult students at The University of Calgary". Report. University of Calgary, Division of Student Affairs.

Braxton, J.M. (1990). "How students choose college." in D. Hossler & J.P. Bean (Eds.).The strategic management of college enrollments. San Francisco, CA: Jossey-Bass.

Canadian Broadcasting Corporation. (1994). "Triangles, rectangles and workaholics: Who's minding the workforce?" Transcript of CBC-Radio's "Morningside". April 4.

Capra, F. (1996). The web of life: A new scientific understanding of living systems. Toronto, ON: Anchor Books.

Chapman, D.W. (1981). "A model of student college choice." *Journal of higher education.* 52 (5) pp. 490–505.

Chapman, R.G. (1986). "Towards a theory of college selection: A model of college search and choice behavior." in R. Lutz (Ed) Advances in Consumer Research. Provo, UT: Association for Consumer Research. v. 13. pp. 246–250.

Chen, H.C.K., Barlar, D. & Sjolander, R. (1989). "Effective marketing strategies flow from sound segmentation data." Paper Presented at Conference on Marketing of Higher Education. Cincinnati, OH, November 12–14. ERIC document reproduction service. ED 318 386.

Church, J. & Gillingham, D. (1988). "Benefit segments for full-time undergraduate students." *Canadian journal of higher education*. 18 (2) pp. 55–73.

Church, J. & Gillingham, D. (1985). "Situational position and student choice criteria." *Canadian journal of higher education*. 15 (2) pp. 31–51.

Cohen, J.B., Fishbein, M. & Ahtola, O.T. (1972). "The nature and uses of expectancy-value models in consumer attitude research." *Journal of marketing research*. November (9). pp. 456–460.

Conklin, M.E. & Dailey, A.R. "Does consistency of parental encouragement matter for secondary students?" *Sociology of education*. 1981. 54 pp. 254–262.

Conway, J.F.(1990) The Canadian family in crisis. Toronto, ON: James Lorimer & Company, Publishers.

Cook, R.W. & Zallocco, R.L. (1983). "Predicting university preference and attendance: Applied marketing in higher education administration." *Research in higher education*. 19 pp. 197–211.

Coté, J.E. & Allahar, A.J. (1994) Generation on hold: Coming of age in the late 20th century. Toronto, ON: Stoddart Publishing Co. Ltd.

Day, G.S. (1972). "Evaluating models of attitude structure." *Journal of marketing research*. August . 9. pp. 279–286.

Dewey, J. (1910). How we think. New York, NY: D.C. Health.

Dixon, P.N. & Martin, N.K. (1991). "Measuring factors that influence college choice." *NASPA journal*. 29 (1) pp. 31–36.

Elias, J. & Merriam, S. (1984). Philosophical foundations of adult education. Malabar, FL: Krieger Publishing Company, Inc.

Engel, J.F., Warshaw, M.R., & Kinnear, T.C. (1987). Promotional strategy: Managing the marketing communications process, 6th Ed. Homewood, IL: Irwin Publishers.

Engel, J.F., Blackwell, R.D. & Miniard, P.W. (1995). Consumer behaviour, 5th Ed. Orlando, FL: The Dryden Press.

Field Belenky, M., McVicker Clinchy, B., Rule Goldberger, N. & Mattuck Tarule, J. (1986). Women's ways of knowing: The development of self, voice and mind. New York, NY: Basic Books.

Fishbein, M. (1967). "A behaviour theory approach to the relations between beliefs about an object and the attitude towards the object." in M. Fishbein (Ed.). Readings in attitude theory and measurement. New York, NY: Wiley. pp. 389–399.

Frank, R.E., Massy, W.F. & Wind, Y. (1972). Market segmentation. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Gilmour, J.E., Spiro, L.M., & Dolich, I.J. (1981). "How high-school students select a college." University Park, University of Pennsylvania. ERIC document reproduction service. ED 208 705.

Ginzberg, E., Ginsburg, S.W., Axelrad, S.W. & Herma, J.L. (1951). Occupational choice: An approach to a general theory. New York, NY: Columbia University Press.

Gower, D. (1990). "Labour force trends: Canada and the United States." in C. McKie & K Thompson (Eds) Canadian social trends. Toronto, ON: Ministry of Supply and Services Canada and Thompson Educational Publishing, Ltd.

Green, P.E. & Tull, D.S. (1978). Research for marketing decisions, 4th Ed. Englewood Cliffs, NJ: Prentice-Hall Inc.

Grove, J. (1992).The marketing effect of enrollment management: Evaluating the impact on recruitment and retention in institutions of higher education. Department of Business Administration, Fontbonne College. ERIC document reproduction service. ED 354 929.

Guppy, N. & Pendakur, K. (1989). "The effects of gender and parental education on participation within post-secondary education in the 1970s and 1980s." *Canadian journal of higher education*. 19 (1). pp. 49–62.

Harren, V.A. (1979). "A model of career decision-making for college students." *Journal of vocational behavior*. (14) pp. 119–133.

Holden, D.J. (1992). Parent-child career planning. Unpublished Master's thesis. University of Calgary, Faculty of Education.

Hossler, D. (1988). "Admissions and enrollment management." in A.L. Rentz & G.L. Saddlemire (Eds). Student affairs function in higher education. Springfield, IL: Charles C. Thomas. pp. 41–69.

Hossler, D. (1991). "Evaluating student recruitment and retention programs." *New directions for institutional research*. No. 70.

Hossler, D. & Bean, J.P. (Eds.) (1990). The strategic management of college enrollments. San Francisco, CA: Jossey-Bass.

Hossler, D. & Gallagher, K.S. (1987). "Studying student college choice: A three-phase model and the implications for policymakers." *College and university*. Spring. pp. 207–221.

Howe, N. & Strauss, B. (1993). 13th Gen: Abort, retry, ignore, fail. New York, NY: Vintage Books Ltd.

Hughes, G.D. (1973). Attitude measurement for marketing strategies. Glenview, IL: Scott, Foresman and Company.

Jackson, G.A. (1978). "Financial aid and student enrollment." *Journal of higher education*. 49 (6) pp. 548–574.

Kaufman, L. & Rousseeuw, P.J. (1990). Finding groups in data: An introduction to cluster analysis. Toronto, ON: John Wiley & Sons, Inc.

Kerlinger, F.N. (1967). Foundations of behavioural research. Toronto, ON: Holt, Rinehart and Winston Inc.

Kotler, P. (1976). "Applying marketing theory to college admissions." Papers presented at the colloquium on college admissions, May 16–18. New York, NY: College Entrance Examination Board.

Krahn, H. & Lowe, G. (1982). "Transitions to work: Findings from a longitudinal study of high-school and university graduates in three Canadian cities." in D. Ashton & G. Lowe (Eds) Making their way: Education, training and the labour market in Canada and Britian. Toronto, ON: University of Toronto Press.

Krivy, G.J. (1996) "Preliminary enrollment statistics as of September 4, 1996". Report. University of Calgary, Registrar's Office.

Lay, R. & Maquire, J. (1981). "Identifying the competition in higher education—two approaches." *College and university*. Winter. pp. 121–139.

Litten, L.H. (1979). "Market structure and institutional position in geographic market segments." *Research in higher education*. 11 (1) pp. 59–83.

Litten, L.H. (1982). "Different strokes in the applicant pool: Some refinements in a model of student-college choice." *Journal of higher education*. 53 (4). pp. 383–402.

Litten, L.H. & Hall, A.E. (1989). "In the eyes of our beholders: Some evidence on how high-school students and their parents view quality in colleges." *Journal of higher education*. (60) pp. 302–324.

Lorr, M. (1983). Cluster analysis for social scientists. San Francisco, CA: Jossey-Bass.

Mahatoo, W.H. (1985). The dynamics of consumer behavior. Toronto, ON: John Wiley & Sons.

Maquire, J. & Lay, R. (1981). "Modeling the college-choice process." *College and university*. 56 (2). pp. 123–139.

Marantz Connor, J., Miawer, Z., Parsons Rabbiner, M., & Sanders, C. (1988). "Sex differences between college students and their parents about reasons for attending college." *Journal of college student development*. July. 29. pp. 340–349.

Merriam, S.B. & Caffarella, R.S. (1991). Learning in adulthood: A comprehensive guide. San Francisco, CA: Jossey-Bass.

Messick, S. (1957). "Metric properties of the semantic differential." *Educational and psychological measurement*. 17. pp. 200–206.

Miller, D. (1995). "Post-graduation destinations of St. Mary's high-school students." Report. Calgary Board of Education, St. Mary's High School.

Moore, M. (1990). "Dual-earner families: The new norm." in C. McKie & K. Thompson (Eds). Canadian social trends. Toronto, ON: Ministry of Supply and Services Canada and Thompson Educational Publishing, Inc.

Morstain, B.B. & Smart, J.C. (1974). "Reasons for participation in adult education courses: A multivariate analysis of group differences." *Adult education*. 24 (2) pp. 83–98.

Murphy, P.E. (1981). "Consumer buying roles in college choice: Parents' and students' perceptions." *College and university*. Winter. pp. 140–150.

Nett, E.M. (1988). Canadian families: Past and present. Vancouver, BC: Buttersworth Canada Ltd.

Norusis, M.J. (1993). SPSS for Windows base system user's guide 6.0. Chicago, IL: SPSS Inc.

Norusis, M.J. (1994). SPSS professional statistics 6.1. Chicago, IL: SPSS, Inc.

Office of Institutional Analysis. (1995) "In the voice of students: Common themes in 8 student surveys". OIA Report 359. University of Calgary, Office of Institutional Analysis.

Osgood, C.E. (1952). "The nature and measurement of meaning." *Psychological bulletin*. 49. pp. 197–237.

Osgood, C.E., Suci, G.J. & Tannenbaum, P.H. (1957). The measure of meaning. Chicago, IL: University of Illinois Press.

Osipow, S.H. (1968). Theories of career development. New York, NY: Appleton-Century-Crofts.

Pain, B.J. (1986). "Education students as consumers: Choices of a university education." *Canadian journal of higher education*. 16 (2) pp. 51–65.

Paulsen, M.B. (1990). "College choice: Understanding student enrollment behavior." Office of Educational Research and Improvement, Washington, DC. ERIC document reproduction service. ED 333 855.

Perry, W. (1970). Forms of intellectual and ethical development in the college years: A scheme. Toronto, ON: Holt, Rinehart and Winston, Inc.

Pitz, G.F. & Harren, V.A. (1980). "An analysis of career decision making from the point of view of information processing and decision theory." *Journal of vocational behavior*. (16) pp. 320–346.

Pope, J.L. (1993). Practical marketing research, 2nd Ed. Toronto, ON: AMACOM.

Rachlin, H. (1988). Judgment, decision, and choice: A cognitive/behavioral synthesis. New York, NY: W.H. Freeman and Company.

Reid, A. (1996). Shakedown: How the new economy is changing our lives. Toronto, ON: Doubleday Canada, Ltd.

Richman, C.A. & Green, G. (1993). "Market segmentation differences using factors of the college selection process." *College and University*. Fall/Winter. pp. 32–37.

Rifkin, J. (1995). The end of work: The decline of the global labour force and the dawn of the post-market era. New York, NY: G.P. Putman's Sons.

Romaniuc, A. (1984). "Fertility in Canada: Baby-boom to baby-bust." *Current demographic analysis*. November.

Rosenberg, M.J. (1956). "Cognitive structure and attitudinal affect." *Journal of abnormal and social psychology*. November. 53. pp. 367–72.

Santrock, J.W. (1990). Adolescence, 4th Ed. Dubuque, IA: W. C. Brown Publishers.

Siegel, S. & Castellan, H.J. (1988) Nonparametric statistics for the behavioral sciences, 2nd Ed. Toronto, ON: McGraw-Hill, Inc.

Sharf, R.S. (1992) Applying career development theory to counselling. Belmont, CA: Wadsworth Publishing Inc.

Sheth, J.N. (1977). Multivariate methods for market and survey research. Chicago, IL: American Marketing Association.

Sheth, J.N. & Talarzyk, W.W. (1972). "Perceived instrumentality and value importance as determinants of attitude." *Journal of marketing research*. February. 9 pp. 6–9.

Snider, J.G. & Osgood, C.E. (1969). Semantic differential technique: A sourcebook. Chicago, IL: Aldine Publishing Company.

Stage, F.K. & Williams, P.D. (1989). "Students' motivation and changes in motivation during the first year of college." Paper presented at at the Annual Meeting of the Association for the Study of higher education, St. Louis, MO, November 3–6. ERIC document reproduction service. ED 303 069.

Strayer, J. (1988). "Mass communication and college choice: An exploratory study." *College and university*. Fall. pp. 81–90.

Super, D.E. (1957). The psychology of careers: An introduction to vocational development. New York, NY: Harper & Row Publishers.

Super, D.E., Crites, J.O., Hummel, R.C., Moser, H.P., Overstreet, P.L. & Warnath, C.F. (1957). Vocational development: A framework for research. New York, NY: Columbia University Press.

Tabachnick, B.G. & Fidell, L.S. (1989). Using multivariate Statistics, 2nd Ed. New York, NY: Harper & Row, Publishers, Inc.

Terkla, D.G. & Pagano, M.F. (1993). "Understanding institutional image." *Research in higher education*. 34 (1) pp. 11–22.

Tierney, M. (1983). "Student college choice sets: Towards an empirical characterization." *Research in higher education*. 18 (3) pp. 271–284.

Trout, J. & Rivkin, S. (1996). The new positioning. Toronto, ON: McGraw-Hill Inc.

Tryon, R.C. & Bailey, D.E. (1970). Cluster analysis. Toronto, ON: McGraw-Hill Book Company.

Tull, D.S. & Hawkins, D.J. (1987). Market research: Measurement and method. 4th Ed. New York, NY: Macmillan Publishing Co.

Vaughn, R., Pitlick, J. & Hansotia, B. (1978). "Understanding university choice: A multi-attribute approach." In K. Hunt (Ed.) *Advances in consumer research*. pp. 26–31.

Wannell, T. (1990). "Losing ground: Wages of young people, 1981–1986." in C. McKie & K. Thompson (Eds). Canadian social trends. Toronto, ON: Ministry of Supply and Services Canada and Thompson Educational Publishing, Inc.

Wanner, R. (1995). "Earnings based on educational attainment." *Social trends*. In press.

Watstein, J. (1987). "Identifying market segments." *New directions for institutional research*. No. 54.

Wiersma, W. (1995). Research methods in education: An introduction, 6th Ed. Toronto, ON: Allyn and Bacon.

Wilkie, W.L. & Pessemier, E.A. (1973). "Issues of marketing's use of multi-attribute attitude models." *Journal of marketing research*. November. 10. pp. 428–441.

Wind, Y. (1978). "Issues and advances in segmentation research." *Journal of marketing research*. 15. pp. 317–337.

Winn, M. (1981). Children without childhood. New York, NY: Pantheon Books.